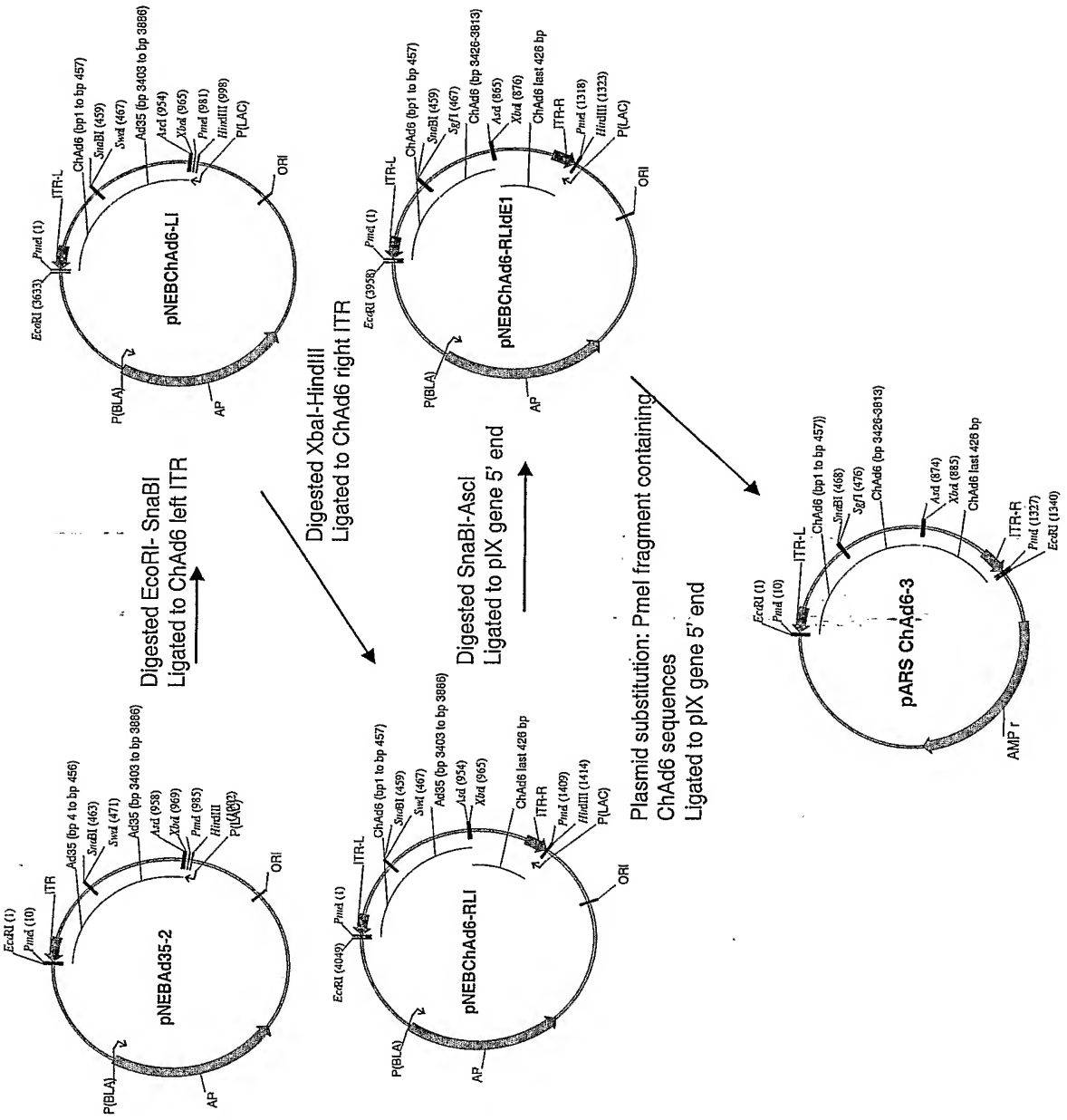
pNEBAd35-2
pNEBChAd6-RLI
pNEBChAd6-RLIdE1
pARS ChAd6-3
pNEBChAd6-LI
Digested EcoRI- SnaBI
Ligated to ChAd6 left ITR
Digested XbaI-HindIII
Ligated to ChAd6 right ITR
Digested SnaBI-AscI
Ligated to pIX gene 5' end
Plasmid substitution: PmeI fragment containing
ChAd6 sequences
Ligated to pIX gene 5' end
ITR
ITR-L
ITR-R
ORI
AP
P(BLA)
P(LAC)
AMP r

FIG. 1

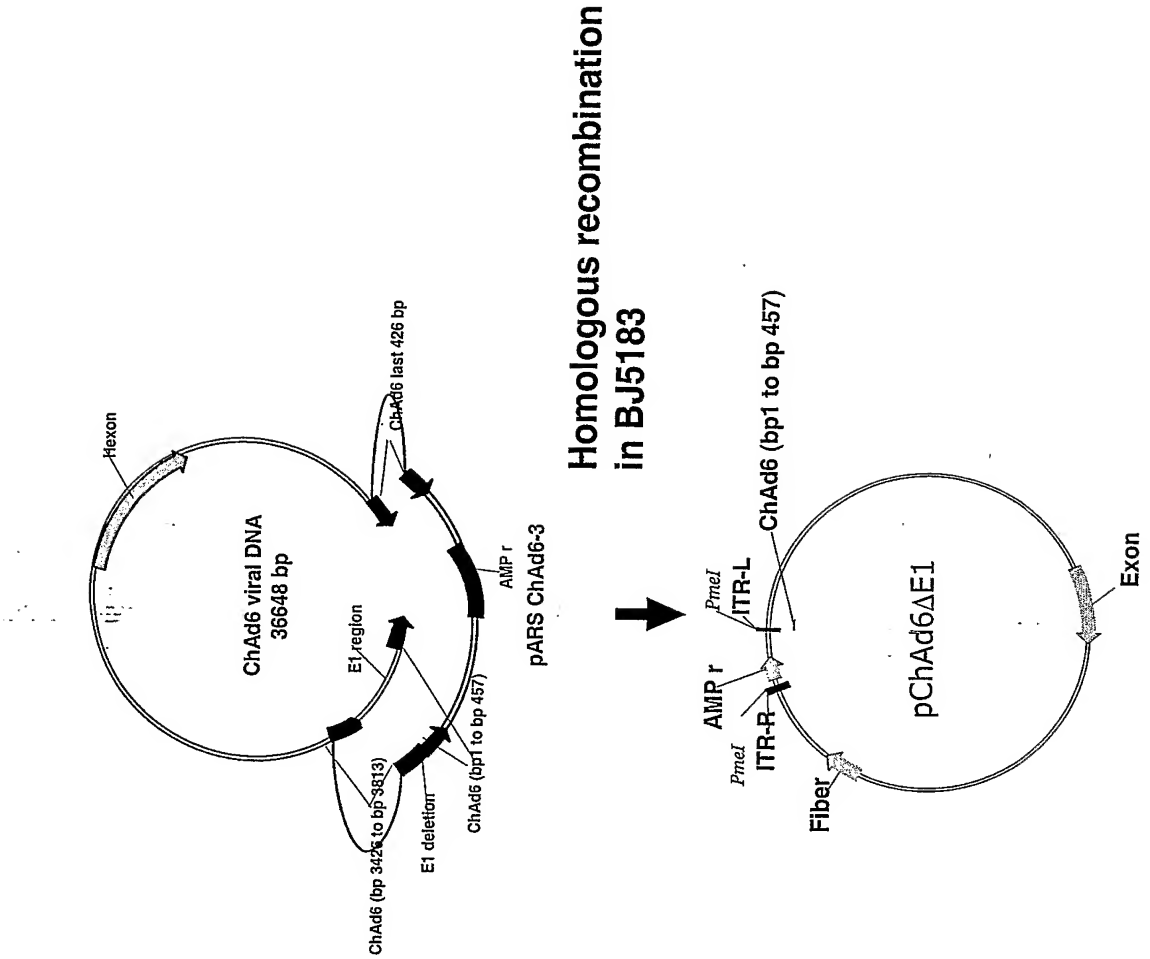
Hexon
ChAd6 viral DNA
36648 bp
E1 region
ChAd6 last 426 bp
AMP r
pARS ChAd6-3
ChAd6 (bp 3426 to bp 3813)
E1 deletion
ChAd6 (bp1 to bp 457)
Homologous recombination
in BJ5183
ChAd6 (bp1 to bp 457)
PmeI
ITR-L
AMP r
PmeI
ITR-R
pChAd6ΔE1
Exon
Fiber

FIG. 2

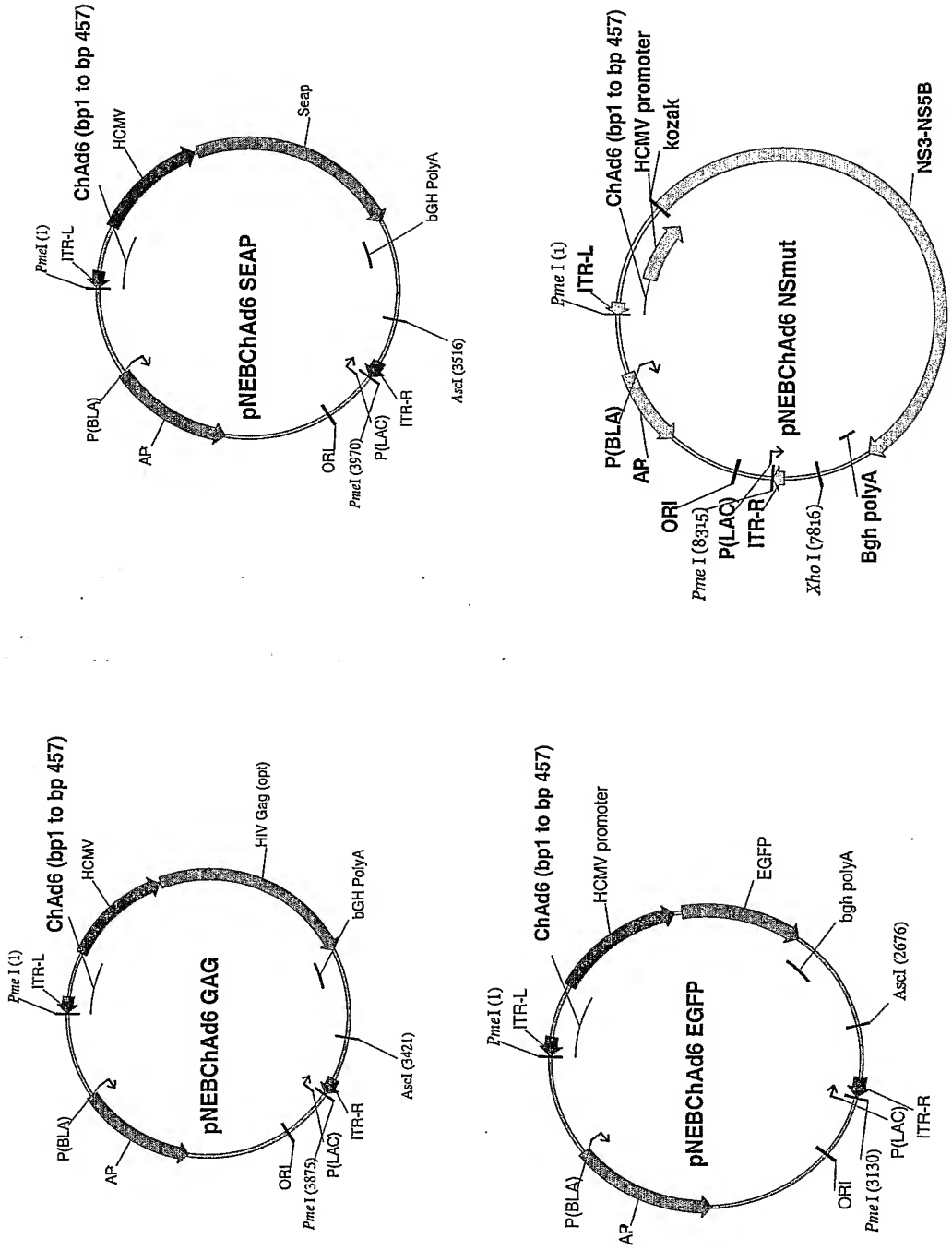
pNEBChAd6 SEAP
ChAd6 (bp1 to bp 457)
HCMV
Seap
bGH PolyA
PmeI (1)
ITR-L
P(BLA)
AP
ORI
PmeI (3970)
P(LAC)
ITR-R
AscI (3516)
pNEBChAd6 NSmut
ChAd6 (bp1 to bp 457)
HCMV promoter
kozak
NS3-NS5B
Pme I (1)
ITR-L
P(BLA)
AP
ORI
Pme I (8315)
P(LAC)
ITR-R
Xho I (7816)
Bgh polyA
pNEBChAd6 GAG
ChAd6 (bp1 to bp 457)
HCMV
HIV Gag (opt)
bGH PolyA
Pme I (1)
ITR-L
P(BLA)
AP
ORI
PmeI (3875)
P(LAC)
ITR-R
AscI (3421)
pNEBChAd6 EGFP
ChAd6 (bp1 to bp 457)
HCMV promoter
EGFP
bgh polyA
AscI (2676)
PmeI (1)
ITR-L
P(BLA)
AP
ORI
PmeI (3130)
P(LAC)
ITR-R

FIG. 3

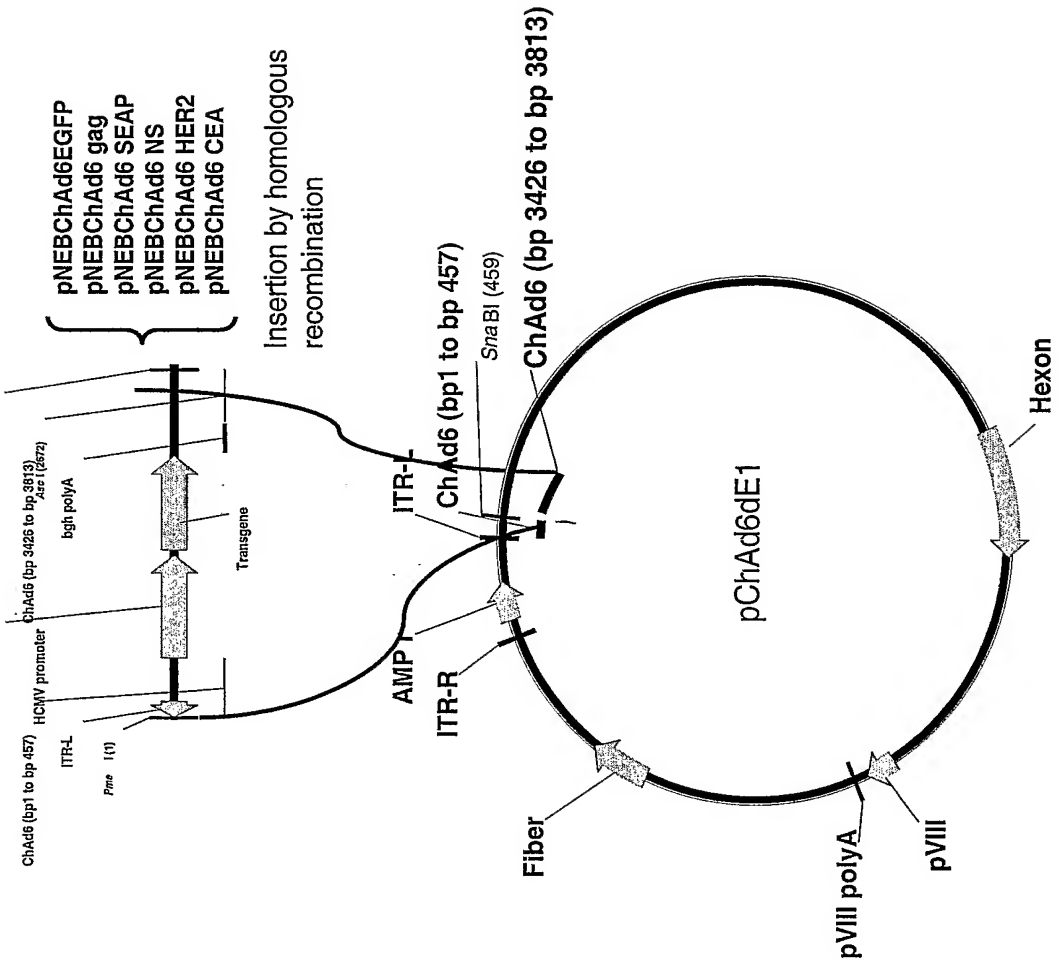
pNEBChAd6EGFP
pNEBChAd6 gag
pNEBChAd6 SEAP
pNEBChAd6 NS
pNEBChAd6 HER2
pNEBChAd6 CEA
Insertion by homologous recombination
ChAd6 (bp1 to bp 457)
HCMV promoter
ChAd6 (bp 3426 to bp 3813)
Ase I (3572)
bgh polyA
Transgene
ITR-L
Pme I (1)
ITR-L
ChAd6 (bp1 to bp 457)
SnaBI (459)
ChAd6 (bp 3426 to bp 3813)
AMP r
ITR-R
pChAd6dE1
Hexon
Fiber
pVIII polyA
pVIII

FIG. 4

```
   1  CATCATCAAT AATATACCTT ATTTTGGATT GAAGCCAATA TGATAATGAG ATGGGCGGCG
  61  CGAGGCGGGG CGCGGGGCGG GAGGCGGGTT TGGGGGCGGG CCGGCGGGCG GGGCGGTGTG
 121  GCGGAAGTGG ACTTTGTAAG TGTGGCGGAT GTGACTTGCT AGTGCCGGGC GCGGTAAAAG
 181  TGACGTTTTC CGTGCGCGAC AACGCCCCCG GGAAGTGACA TTTTTCCCGC GGTTTTTACC
 241  GGATGTTGTA GTGAATTTGG GCGTAACCAA GTAAGATTTG GCCATTTTCG CGGGAAAACT
 301  GAAACGGGGA AGTGAAATCT GATTAATTTT GCGTTAGTCA TACCGCGTAA TATTTGTCTA
 361  GGGCCGAGGG ACTTTGGCCG ATTACGTGGA GGACTCGCCC AGGTGTTTTT TGAGGTGAAT
 421  TTCCGCGTTC CGGGTCAAAG TCTCCGTTTT.ATTATTATAG TCAGCTGACG CGGAGTGTAT
 481  TTATACCCTC TGATCTCGTC AAGAGGCCAC TCTTGAGTGC CAGCGAGTAG AGTTTTCTCC
 541  TCTGCCGCTC TCCGCTCCGC TCCGCTCGGC TCTGACACCG GGGAAAAAAT GAGACATTTC
 601  ACCTACGATG GCGGTGTGCT CACCGGCCAG CTGGCTGCTG AGGTCCTGGA CACCCTGATC
 661  GAGGAGGTAT TGGCCGATAA TTATCCTCCC TCGACTCCTT TTGAGCCACC TACACTTCAC
 721  GAACTATACG ATCTGGATGT GGTGGGGCCC AGCGATCCGA ACGAGCAGGC GGTTTCCAGT
 781  TTTTTTCCAG AGTCCATGTT GTTGGCCAGC CAGGAGGGGG TCGAACTTGA GACCCCTCCT
 841  CCGATCGTGG ATTCCCCCGA TCCGCCGCAG CTGACTAGGC AGCCCGAGCG CTGTGCGGGA
 901  CCTGAGACTA TGCCCCAGCT GCTACCTGAG GTGATCGATC TCACCTGTAA TGAGTCTGGT
 961  TTTCCACCCA GCGAGGATGA GGACGAAGAG GGTGAGCAGT TTGTGTTAGA TTCTGTGGAA
1021  CAACCCGGGC GAGGATGCAG GTCTTGTCAA TATCACCGGA AAAACACAGG AGACTCCCAG
1081  ATTATGTGTT CTCTGTGTTA TATGAAGATG ACCTGTATGT TTATTTACAG TAAGTTTATC
1141  ATCGGTGGGC AGGTGGGCTA TAGTGTGGGT GGTGGTCTTT GGGGGGTTTT TTAATATATG
1201  TCAGGGGTTA TGCTGAAGAC TTTTTTATTG TGATTTTTAA AGGTCCAGTG TCTGAGCCCG
1261  AGCAAGAACC TGAACCGGAG CCTGAGCCTT CTCGCCCCAG GAGAAAGCCT GTAATCTTAA
1321  CTAGACCCAG CGCACCGGTA GCGAGAGGCC TCAGCAGCGC GGAGACCACC GACTCCGGTG
1381  CTTCCTCATC ACCCCCGGAG ATTCACCCCC TGGTGCCCCT ATGTCCCGTT AAGCCCGTTG
1441  CCGTGAGAGT CAGTGGGCGG CGGTCTGCTG TGGAGTGCAT TGAGGACTTG CTTTTTGATT
1501  CACAGGAACC TTTGGACTTG AGCTTGAAAC GCCCCAGGCA TTAAACCTGG TCACCTGGAC
1561  TGAATGAGTT GACGCCTATG TTTGCTTTTG AATGACTTAA TGTGTATAGA TAATAAAGAG
1621  TGAGATAATG TTTTAATTGC ATGGTGTGTT TAACTTGGGC GGAGTCTGCT GGGTATATAA
1681  GCTTCCCTGG GCTAAACTTG GTTACACTTG ACCTCATGGA GGCCTGGGAG TGTTTGGAGA
1741  ACTTTGCCGG AGTTCGTGCC TTGCTGGACG AGAGCTCTAA CAATACCTCT TGGTGGTGGA
1801  GGTATTTGTG GGGCTCTCCC CAGGGCAAGT TAGTTTGTAG AATCAAGGAG GATTACAAGT
1861  GGGAATTTGA AGAGCTTTTG AAATCCTGTG GTGAGCTATT GGATTCTTTG AATCTAGGCC
1921  ACCAGGCTCT CTTCCAGGAG AAGGTCATCA GGACTTTGGA TTTTTCCACA CCGGGGCGCA
1981  TTGCAGCCGC GGTTGCTTTT CTAGCTTTTT TGAAGGATAG ATGGAGCGAA GAGACCCACT
2041  TGAGTTCGGG CTACGTCCTG GATTTTCTGG CCATGCAACT GTGGAGAGCA TGGATCAGAC
2101  ACAAGAACAG GCTGCAACTG TTGTCTTCCG TCCGCCCGTT GCTGATTCCG GCGGAGGAGC
2161  AACAGGCCGG GTCAGAGGAC CGGGCCCGTC GGGATCCGGA GGAGAGGGCA CCGAGGCCGG
2221  GCGAGAGGAG CGCGCTGAAC CTGGGAACCG GGCTGAGCGG CCATCCACAT CGGGAGTGAA
2281  TGTCGGGCAG GTGGTGGATC TTTTTCCAGA ACTGCGGCGG ATTTTGACTA TTAGGGAGGA
2341  TGGGCAATTT GTTAAGGGTC TTAAGAGGGA GAGGGGGGCT TCTGAGCATA ACGAGGAGGC
2401  CAGTAATTTA GCTTTTAGCT TGATGACCAG ACACCGTCCA GAGTGCATCA CTTTTCAGCA
2461  GATTAAGGAC AATTGTGCCA ATGAGTTGGA TCTGTTGGGT CAGAAGTATA GCATAGAGCA
2521  GCTGACCACT TACTGGCTGC AGCCGGGTGA TGATCTGGAG GAAGCTATTA GGGTGTATGC
2581  TAAGGTGGCC CTGCGGCCCG ATTGCAAGTA CAAGCTCAAG GGGCTGGTGA ATATCAGGAA
2641  TTGTTGCTAC ATTTCTGGCA ACGGGGCGGA GGTGGAGATA GAGACCGAAG ACAGGGTGGC
2701  TTTCAGATGC AGCATGATGA ATATGTGGCC GGGGGTGCTG GGCATGGACG GGGTGGTGAT
2761  TATGAATGTG AGGTTCACGG GGCCCAACTT TAACGGCACG GTGTTTTTGG GGAACACCAA
2821  CCTGGTCCTG CACGGGGTGA GCTTCTATGG GTTTAACAAC ACCTGTGTGG AGGCCTGGAC
2881  CGATGTGAAG GTCCGCGGTT GCGCCTTTTA TGGATGTTGG AAGGCCATAG TGAGCCGCCC
2941  TAAGAGCAGG AGTTCCATTA AGAAATGCTT GTTTGAGAGG TGCACCTTGG GGATCCTGGC
3001  CGAGGGCAAC TGCAGGGTGC GCCACAATGT GGCCTCCGAG TGCGGTTGCT TCATGCTAGT
3061  CAAGAGCGTG GCGGTAATCA AGCATAATAT GGTGTGCGGC AACAGCGAGG ACAAGGCCTC
3121  ACAGATGCTG ACCTGCACGG ATGGCAACTG CCACTTGCTG AAGACCATCC ATGTAACCAG
3181  CCACAGCCGG AAGGCCTGGC CCGTGTTCGA GCACAACTTG CTGACCCGCT GCTCCTTGCA
3241  TCTGGGCAAC AGGCGGGGGG TGTTCCTGCC CTATCAATGC AACTTTAGTC ACACCAAGAT
3301  CTTGCTAGAG CCCGAGAGCA TGTCCAAGGT GAACTTGAAC GGGGTGTTTG ACATGACCAT
3361  GAAGATCTGG AAGGTGCTGA GGTACGACGA GACCAGGTCC CGGTGCAGAC CCTGCGAGTG
3421  CGGGGGCAAG CATATGAGGA ACCAGCCCGT GATGCTGGAT GTGACCGAGG AGCTGAGGAC
```

FIG. 5A

```
3481  AGACCACTTG GTTCTGGCCT GCACCAGGGC CGAGTTTGGT TCTAGCGATG AAGACACAGA
3541  TTGAGGTGGG TGAGTGGGCG TGGCCTGGGG TGGTCATGAA AATATATAAG TTGGGGGTCT
3601  TAGGGTCTCT TTATTTGTGT TGCAGAGACC GCCGGAGCCA TGAGCGGGAG CAGCAGCAGC
3661  AGCAGTAGCA GCAGCGCCTT GGATGGCAGC ATCGTGAGCC CTTATTTGAC GACGCGGATG
3721  CCCCACTGGG CCGGGGTGCG TCAGAATGTG ATGGGCTCCA GCATCGACGG CCGACCCGTC
3781  CTGCCCGCAA ATTCCGCCAC GCTGACCTAT GCGACCGTCG CGGGGACGCC GTTGGACGCC
3841  ACCGCCGCCG CCGCCGCCAC CGCAGCCGCC TCGGCCGTGC GCAGCCTGGC CACGGACTTT
3901  GCATTCCTGG GACCACTGGC GACAGGGGCT ACTTCTCGGG CCGCTGCTGC CGCCGTTCGC
3961  GATGACAAGC TGACCGCCCT GCTGGCGCAG TTGGATGCGC TTACTCGGGA ACTGGGTGAC
4021  CTTTCTCAGC AGGTCATGGC CCTGCGCCAG CAGGTCTCCT CCCTGCAAGC TGGCGGGAAT
4081  GCTTCTCCCA CAAATGCCGT TTAAGATAAA TAAAACCAGA CTCTGTTTGG ATTAAAGAAA
4141  AGTAGCAAGT GCATTGCTCT CTTTATTTCA TAATTTTCCG CGCGCGATAG GCCCTAGACC
4201  AGCGTTCTCG GTCGTTGAGG GTGCGGTGTA TCTTCTCCAG GACGTGGTAG AGGTGGCTCT
4261  GGACGTTGAG ATACATGGGC ATGAGCCCGT CCCGGGGGTG GAGGTAGCAC CACTGCAGAG
4321  CTTCATGCTC CGGGGTGGTG TTGTAGATGA TCCAGTCGTA GCAGGAGCGC TGGGCATGGT
4381  GCCTAAAAAT GTCCTTCAGC AGCAGGCCGA TGGCCAGGGG GAGGCCCTTG GTGTAAGTGT
4441  TTACAAAACG GTTAAGTTGG GAAGGGTGCA TTCGGGGAGA GATGATGTGC ATCTTGGACT
4501  GTATTTTTAG ATTGGCGATG TTTCCGCCCA GATCCCTTCT GGGATTCATG TTGTGCAGGA
4561  CCACCAGTAC AGTGTATCCG GTGCACTTGG GGAATTTGTC ATGCAGCTTA GAGGGAAAAG
4621  CGTGGAAGAA CTTGGAGACG CCCTTGTGGC CTCCCAGATT TTCCATGCAT TCGTCCATGA
4681  TGATGGCAAT GGGCCCGCGG GAGGCAGCTT GGGCAAAGAT ATTTCTGGGG TCGCTGACGT
4741  CGTAGTTGTG TTCCAGGGTG AGGTCGTCAT AGGCCATTTT TACAAAGCGC GGGCGGAGGG
4801  TGCCCGACTG GGGGATGATG GTCCCCTCTG GCCCTGGGGC GTAGTTGCCC TCGCAGATCT
4861  GCATTTCCCA GGCCTTAATC TCGGAGGGGG GAATCATATC CACCTGCGGG GCGATGAAGA
4921  AAACGGTTTC CGGAGCCGGG GAGATTAACT GGGATGAGAG CAGGTTTCTA AGCAGCTGTG
4981  ATTTTCCACA ACCGGTGGGC CCATAAATAA CACCTATAAC CGGTTGCAGC TGGTAGTTTA
5041  GAGAGCTGCA GCTGCCGTCG TCCCGGAGGA GGGGGGCCAC CTCGTTGAGC ATGTCCCTGA
5101  CGCGCATGTT CTCCCCGACC AGATCCGCCA GAAGGCGCTC GCCGCCCAGG GACAGCAGCT
5161  CTTGCAAGGA AGCAAAGTTT TTCAGCGGCT TGAGGCCGTC CGCCGTGGGC ATGTTTTTCA
5221  GGGTCTGGCT CAGCAGCTCC AGGCGGTCCC AGAGCTCGGT GACGTGCTCT ACGGCATCTC
5281  TATCCAGCAT ATCTCCTCGT TTCGCGGGTT GGGGCGACTT TCGCTGTAGG GCACCAAGCG
5341  GTGGTCGTCC AGCGGGGCCA AAGTCATGTC CTTCCATGGG CGCAGGGTCC TCGTCAGGGT
5401  GGTCTGGGTC ACGGTGAAGG GGTGCGCTCC GGGCTGAGCG CTTGCCAAGG TGCGCTTGAG
5461  GCTGGTTCTG CTGGTGCTGA AGCGCTGCCG GTCTTCGCCC TGCGCGTCGG CCAGGTAGCA
5521  TTTGACCATG GTGTCATAGT CCAGCCCCTC CGCGGCGTGT CCCTTGGCGC GCAGCTTGCC
5581  CTTGGAGGTG GCGCCGCACG AGGGGCAGAG CAGGCTCTTG AGCGCGTAGA GCTTGGGGGC
5641  GAGGAAGACC GATTCGGGGG AGTAGGCGTC CGCGCCGCAG ACCCCGCACA CGGTCTCGCA
5701  CTCCACCAGC CAGGTGAGCT CGGGGCGCGC CGGGTCAAAA ACCAGGTTTC CCCCATGCTT
5761  TTTGATGCGT TTCTTACCTC GGGTCTCCAT GAGGTGGTGT CCCCGCTCGG TGACGAAGAG
5821  GCTGTCCGTG TCTCCGTAGA CCGACTTGAG GGGTCTTTTC TCCAGGGGGG TCCCTCGGTC
5881  TTCCTCGTAG AGGAACTCGG ACCACTCTGA GACGAAGGCC CGCGTCCAGG CCAGGACGAA
5941  GGAGGCTATG TGGGAGGGGT AGCGGTCGTT GTCCACTAGG GGGTCCACCT TCTCCAAGGT
6001  GTGAAGACAC ATGTCGCCTT CCTCGGCGTC CAGGAAGGTG ATTGGCTTGT AGGTGTAGGC
6061  CACGTGACCG GGGGTTCCTG ACGGGGGGGT ATAAAAGGGG GTGGGGGCGC GCTCGTCGTC
6121  ACTCTCTTCC GCATCGCTGT CTGCGAGGGC CAGCTGCTGG GGTGAGTATT CCCTCTCGAA
6181  GGCGGGCATG ACCTCCGCGC TGAGGTTGTC AGTTTCCAAA AACGAGGAGG ATTTGATGTT
6241  CACCTGTCCC GAGGTGATAC CTTTGAGGGT ACCCGCGTCC ATCTGGTCAG AAAACACGAT
6301  CTTTTTATTG TCCAGCTTGG TGGCGAACGA CCCGTAGAGG GCGTTGGAGA GCAGCTTGGC
6361  GATGGAGCGC AGGGTCTGGT TCTTGTCCCT GTCGGCGCGC TCCTTGGCCG CGATGTTGAG
6421  CTGCACGTAC TCGCGCGCGA CGCAGCGCCA CTCGGGGAAG ACGGTGGTGC GCTCGTCGGG
6481  CACCAGGCGC ACGCGCCAGC CGCGGTTGTG CAGGGTGACC AGGTCCACGC TGGTGGCGAC
6541  CTCGCCGCGC AGGCGCTCGT TGGTCCAGCA GAGACGGCCG CCCTTGCGCG AGCAGAAGGG
6601  GGGCAGGGGG TCGAGCTGGG TCTCGTCCGG GGGGTCCGCG TCCACGGTGA AAACCCCGGG
6661  GCGCAGGCGC GCGTCGAAGT AGTCTATCTT GCAACCTTGC ATGTCCAGCG CCTGCTGCCA
6721  GTCGCGGGCG GCGAGCGCGC GCTCGTAGGG GTTGAGCGGC GGGCCCCAGG GCATGGGGTG
6781  GGTGAGTGCG GAGGCGTACA TGCCGCAGAT GTCATAGACG TAGAGGGGCT CCCGCAGGAC
6841  CCCGATGTAG GTGGGGTAGC AGCGGCCGCC GCGGATGCTG GCGCGCACGT AGTCATACAG
6901  CTCGTGCGAG GGGGCGAGGA GGTCGGGGCC CAGGTTGGTG CGGGCGGGGC GCTCCGCGCG
```

FIG. 5B

```
 6961  GAAGACGATC TGCCTGAAGA TGGCATGCGA GTTGGAAGAG ATGGTGGGGC GCTGGAAGAC
 7021  GTTGAAGCTG GCGTCCTGCA GGCCGACGGC GTCGCGCACG AAGGAGGCGT AGGAGTCGCG
 7081  CAGCTTGTGT ACCAGCTCGG CGGTGACCTG CACGTCGAGC GCGCAGTAGT CGAGGGTCTC
 7141  GCGGATGATG TCATATTTAG CCTGCCCCTT CTTTTTCCAC AGCTCGCGGT TGAGGACAAA
 7201  CTCTTCGCGG TCTTTCCAGT ACTCTTGGAT CGGGAAACCG TCCGGTTCCG AACGGTAAGA
 7261  GCCTAGCATG TAGAACTGGT TGACGGCCTG GTAGGCGCAG CAGCCCTTCT CCACGGGGAG
 7321  GGCGTAGGCC TGCGCGGCCT TGCGGAGCGA GGTGTGGGTC AGGGCGAAGG TGTCCCTGAC
 7381  CATGACTTTG AGGTACTGGT GCTTGAAGTC GGAGTCGTCG CAGCCGCCCC GCTCCCAGAG
 7441  CGAGAAGTCG GTGCGCTTCT TGGAGCGGGG GTTGGGCAGA GCGAAGGTGA CATCGTTGAA
 7501  GAGGATTTTG CCCGCGCGGG GCATGAAGTT GCGGGTGATG CGGAAGGGCC CCGGCACTTC
 7561  AGAGCGGTTG TTGATGACCT GGGCGGCGAG CACGATCTCG TCGAAGCCGT TGATGTTGTG
 7621  GCCCACGATG TAGAGTTCCA GGAAGCGGGG CCGGCCCTTT ACGGTGGGCA GCTTCTTTAG
 7681  CTCTTCGTAG GTGAGCTCCT CGGGCGAGGC GAGGCCGTGC TCGGCCAGGG CCCAGTCCGC
 7741  GAGGTGCGGG TTGTCTCTGA GGAAGGACTC CCAGAGGTCG CGGGCCAGGA GGGTCTGCAG
 7801  GCGGTCCCTG AAGGTCCTGA ACTGGCGGCC CACGGCCATT TTTTCGGGGG TGATGCAGTA
 7861  GAAGGTGAGG GGGTCTTGCT GCCAGCGGTC CCAGTCGAGC TGCAGGGCGA GGTCGCGCGC
 7921  GGCGGTGACC AGGCGCTCGT CGCCCCCGAA TTTCATGACC AGCATGAAGG GCACGAGCTG
 7981  CTTTCCGAAG GCCCCCATCC AAGTGTAGGT CTCTACATCG TAGGTGACAA AGAGGCGCTC
 8041  CGTGCGAGGA TGCGAGCCGA TCGGGAAGAA CTGGATCTCC CGCCACCAGT TGGAGGAGTG
 8101  GCTGTTGATG TGGTGGAAGT AGAAGTCCCG TCGCCGGGCC GAACACTCGT GCTGGCTTTT
 8161  GTAAAAGCGA GCGCAGTACT GGCAGCGCTG CACGGGCTGT ACCTCCTGCA CGAGATGCAC
 8221  CTTTCGCCCG CGCACGAGGA AGCCGAGGGG AAATCTGAGC CCCCCGCCTG GCTCGCGGCA
 8281  TGGCTGGTGC TCTTCTACTT TGGATGCGTG TCCGTCTCCG TCTGGCTCCT CGAGGGGTGT
 8341  TACGGTGGAG CGGACCACCA CGCCGCGCGA GCCGCAGGTC CAGATATCGG CGCGCGGCGG
 8401  TCGGAGTTTG ATGACGACAT CGCGCAGCTG GGAGCTGTCC ATGGTCTGGA GCTCCCGCGG
 8461  CGGCGGCAGG TCAGCCGGGA GTTCTTGCAG GTTCACCTCG CAGAGTCGGG CCAGGGCGCG
 8521  GGGCAGGTCT AGGTGGTACC TGATCTCTAG GGGCGTGTTG GTGGCGGCGT CGATGGCTTG
 8581  CAGGAGCCCG CATCCCCGGG GGGCGACGAC GGTGCCCCGC GGGGTGGTGG TGGTGGTGGT
 8641  GGTGGTGGTG GTGGCGGTGC AGCTCAGAAG CGGTGCCGCG GGCGGGCCCC CGGAGGTAGG
 8701  GGGGGCTCCG GTCCCGCCGG CAGGGGCGGC AGCGGCACGT CGGCGTGGAG CGCGGGCAGG
 8761  AGTTGGTGCT GTGCCCGGAG GTTGCTGGCG AAGGCGACGA CGCGGCGGTT GATCTCCTGG
 8821  ATCTGGCGCC TCTGCGTGAA GACGACGGGC CCGGTGAGCT TGAACCTGAA AGAGAGTTCG
 8881  ACAGAATCAA TCTCGGTGTC ATTGACCGCG GCCTGGCGCA GGATCTCCTG CACGTCTCCC
 8941  GAGTTGTCTT GGTAGGCGAT CTCGGCCATG AACTGCTCGA TCTCTTCCTC CTGGAGGTCT
 9001  CCGCGTCCGG CGCGTTCCAC GGTGGCCGCC AGGTCGTTGG AGATGCGCCC CATGAGCTGC
 9061  GAGAAGGCGT TGAGTCCGCC CTCGTTCCAG ACTCGGCTGT AGACCACGCC CCCCTGGTCA
 9121  TCGCGGGCGC GCATGACCAC CTGCGCGAGG TTGAGCTCCA CGTGCCGCGC GAAGACGGCG
 9181  TAGTTGCGCA GACGCTGGAA GAGGTAGTTG AGGGTGGTGG CGGTGTGCTC GGCCACGAAG
 9241  AAGTTCATGA CCCAGCGGCG CAACGTGGAT TCGTTGATGT CCCCCAAGGC CTCCAGCCGT
 9301  TCCATGGCCT CGTAGAAGTC CACGGCGAAG TTGAAAAACT GGGAGTTGCG CGCCGACACG
 9361  GTCAACTCCT CCTCCAGAAG ACGGATGAGC TCGGCGACGG TGTCGCGCAC CTCGCGCTCG
 9421  AAGGCTATGG GGATCTCTTC CTCCGCTAGC ATCACCACCT CCTCCTCTTC CTCCTCTTCT
 9481  GGCACTTCCA TGATGGCTTC CTCCTCTTCG GGGGGCGGCG GCGGCGGCGG TGGGGGAGGG
 9541  GGCGCTCTGC GCCGGCGGCG GCGCACCGGG AGGCGGTCCA CGAAGCGCGC GATCATCTCC
 9601  CCGCGGCGGC GGCGCATGGT CTCGGTGACG GCGCGGCCGT TCTCCCGGGG GCGCAGTTGG
 9661  AAGACGCCGC CGGACATCTG GTGCTGGGGC GGGTGGCCGT GAGGCAGCGA AACGGCGCTG
 9721  ACGATGCATC TCAACAATTG CTGCGTAGGT ACGCCGCCGA GGGACCTGAG GGAGTCCATA
 9781  TCCACCGGAT CCGAAAACCT TTCGAGGAAG GCGTCTAACC AGTCGCAGTC GCAAGGTAGG
 9841  CTGAGCACCG TGGCGGGCGG CGGGGGGTGG GGGGAGTGTC TGGCGGAGGT GCTGCTGATG
 9901  ATGTAATTGA AGTAGGCGGA CTTGACACGG CGGATGGTCG ACAGGAGCAC CATGTCCTTG
 9961  GGTCCGGCCT GCTGGATGCG GAGGCGGTCG GCTATGCCCC AGGCTTCGTT CTGGCATCGG
10021  CGCAGGTCCT TGTAGTAGTC TTGCATGAGC CTTTCCACCG GCACCTCTTC TCCTTCCTCT
10081  TCTGCTTCTT CCATGTCTGC TTCGGCCCTG GGGCGGCGCC GCGCCCCCCT GCCCCCCATG
10141  CGCGTGACCC CGAACCCCCT GAGCGGTTGG AGCAGGGCCA GGTCGGCGAC GACGCGCTCG
10201  GCCAGGATGG CCTGCTGCAC CTGCGTGAGG GTGGTTTGGA AGTCATCCAA GTCCACGAAG
10261  CGGTGGTAGG CGCCCGTGTT GATGGTGTAG GTGCAGTTGG CCATGACGGA CCAGTTGACG
10321  GTCTGGTGGC CCGGTTGCGA CATCTCGGTG TACCTGAGTC GCGAGTAGGC GCGGGAGTCG
10381  AAGACGTAGT CGTTGCAAGT CCGCACCAGG TACTGGTAGC CCACCAGGAA GTGCGGCGGC
```

FIG. 5C

```
10441  GGCTGGCGGT AGAGGGGCCA GCGCAGGGTG GCGGGGGCTC CGGGGGCCAG GTCTTCCAGC
10501  ATGAGGCGGT GGTAGGCGTA GATGTACCTG GACATCCAGG TGATACCCGC GGCGGTGGTG
10561  GAGGCGCGCG GGAAGTCGCG CACCCGGTTC CAGATGTTGC GCAGGGGCAG AAAGTGCTCC
10621  ATGGTAGGCG TGCTCTGTCC AGTCAGACGC GCGCAGTCGT TGATACTCTA GACCAGGGAA
10681  AACGAAAGCC GGTCAGCGGG CACTCTTCCG TGGTCTGGTG AATAGATCGC AAGGGTATCA
10741  TGGCGGAGGG CCTCGGTTCG AGCCCCGGGT CCGGGCCGGA CGGTCCGCCA TGATCCACGC
10801  GGTTACCGCC CGCGTGTCGA ACCCAGGTGT GCGACGTCAG ACAACGGTGG AGTGTTCCTT
10861  TTGGCGTTTT TCTGGCCGGG CGCCGGCGTC GCGTAAGAGA CTAAGCCGCG AAAGCGAAAG
10921  CAGTAAGTGG CTCGCTCCCC GTAGCCGGAG GGATCCTTGC TAAGGGTTGC GTTGCGGCGA
10981  ACCCCGGTTC GAATCCCGTA CTCGGGCCGG CCGGACCCGC GGCTAAGGTG TTGGATTGGC
11041  CTCCCCCTCG TATAAAGACC CCGCTTGCGG ATTGACTCCG GACACGGGGA CGAGCCCCTT
11101  TTATTTTTGC TTTCCCCAGA TGCATCCGGT GCTGCGGCAG ATGCGCCCCC CGCCCCAGCA
11161  GCAGCAACAA CACCAGCAAG AGCGGCAGCA ACAGCAGCGG GAGTCATGCA GGGCCCCCTC
11221  ACCCACCCTC GGCGGGCCGG CCACCTCGGC GTCCGCGGCC GTGTCTGGCG CCTGCGGCGG
11281  CGGCGGGGGG CCGGCTGACG ACCCCGAGGA GCCCCCGCGG CGCAGGGCCA GACACTACCT
11341  GGACCTGGAG GAGGGCGAGG GCCTGGCGCG GCTGGGGGCG CCGTCTCCCG AGCGCCACCC
11401  GCGGGTGCAG CTGAAGCGCG ACTCGCGCGA GGCGTACGTG CCTCGGCAGA ACCTGTTCAG
11461  GGACCGCGCG GGCGAGGAGC CCGAGGAGAT GCGGGACAGG AGGTTCAGCG CAGGGCGGGA
11521  GCTGCGGCAG GGGCTGAACC GCGAGCGGCT GCTGCGCGAG GAGGACTTTG AGCCCGACGC
11581  GCGGACGGGG ATCAGCCCCG CGCGCGCGCA CGTGGCGGCC GCCGACCTGG TGACGGCGTA
11641  CGAGCAGACG GTGAACCAGG AGATCAACTT CCAAAAGAGT TTCAACAACC ACGTGCGCAC
11701  GCTGGTGGCG CGCGAGGAGG TGACCATCGG GCTGATGCAC CTGTGGGACT TTGTAAGCGC
11761  GCTGGTGCAG AACCCCAACA GCAAGCCTCT GACGGCGCAG CTGTTCCTGA TAGTGCAGCA
11821  CAGCAGGGAC AACGAGGCGT TTAGGGACGC GCTGCTGAAC ATCACCGAGC CCGAGGGTCG
11881  GTGGCTGCTG GACCTGATTA ACATCCTGCA GAGCATAGTG GTGCAGGAGC GCAGCCTGAG
11941  CCTGGCCGAC AAGGTGGCGG CCATCAACTA CTCGATGCTG AGCCTGGGCA AGTTTTACGC
12001  GCGCAAGATC TACCAGACGC CGTACGTGCC CATAGACAAG GAGGTGAAGA TCGACGGTTT
12061  TTACATGCGC ATGGCGCTGA AGGTGCTCAC CCTGAGCGAC GACCTGGGCG TGTACCGCAA
12121  CGAGCGCATC CACAAGGCCG TGAGCGTGAG CCGGCGGCGC GAGCTGAGCG ACCGCGAGCT
12181  GATGCACAGC CTGCAGCGGG CGCTGGCGGG CGCCGGCAGC GGCGACAGGG AGGCGGAGTC
12241  CTACTTCGAT GCGGGGGCGG ACCTGCGCTG GGCGCCCAGC CGGCGGGCCC TGGAGGCCGC
12301  GGGGGTCCGC GAGGACTATG ACGAGGACGG CGAGGAGGAT GAGGAGTACG AGCTAGAGGA
12361  GGGCGAGTAC CTGGACTAAA CCGCGGGTGG TGTTTCCGGT AGATGCAAGA CCCGAACGTG
12421  GTGGACCCGG CGCTGCGGGC GGCTCTGCAG AGCCAGCCGT CCGGCCTTAA CTCCTCAGAC
12481  GACTGGCGAC AGGTCATGGA CCGCATCATG TCGCTGACGG CGCGTAACCC GGACGCGTTC
12541  CGGCAGCAGC CGCAGGCCAA CAGGCTCTCC GCCATCCTGG AGGCGGTGGT GCCTGCGCGC
12601  TCGAACCCCA CGCACGAGAA GGTGCTGGCC ATAGTGAACG CGCTGGCCGA GAACAGGGCC
12661  ATCCGCCCGG ACGAGGCCGG GCTGGTGTAC GACGCGCTGC TGCAGCGCGT GGCCCGCTAC
12721  AACAGCGGCA ACGTGCAGAC CAACCTGGAC CGGCTGGTGG GGGACGTGCG CGAGGCGGTG
12781  GCGCAGCGCG AGCGCGCGGA TCGGCAGGGC AACCTGGGCT CCATGGTGGC GCTGAATGCC
12841  TTCCTGAGCA CGCAGCCGGC CAACGTGCCG CGGGGGCAGG AAGACTACAC CAACTTTGTG
12901  AGCGCGCTGC GGCTGATGGT GACCGAGACC CCCCAGAGCG AGGTGTACCA GTCGGGCCCG
12961  GACTACTTCT TCCAGACCAG CAGACAGGGC CTGCAGACGG TGAACCTGAG CCAGGCTTTC
13021  AAGAACCTGC GGGGGCTGTG GGGCGTGAAG GCGCCCACCG GCGACCGGGC GACGGTGTCC
13081  AGCCTGCTGA CGCCCAACTC GCGCCTGCTG CTGCTGCTGA TCGCGCCGTT CACGGACAGC
13141  GGCAGCGTGT CCCGGGACAC CTACCTGGGG CACCTGCTGA CCCTGTACCG CGAGGCCATC
13201  GGGCAGGCGC AGGTGGACGA GCACACCTTC CAGGAGATCA CCAGCGTGAG CCGCGCGCTG
13261  GGGCAGGAGG ACACGAGCAG CCTGGAGGCG ACTCTGAACT ACCTGCTGAC CAACCGGCGG
13321  CAGAAGATTC CCTCGCTGCA CAGCCTGACC TCCGAGGAGG AGCGCATCTT GCGCTACGTG
13381  CAGCAGAGCG TGAGCCTGAA CCTGATGCGC GACGGGGTGA CGCCCAGCGT GGCGCTGGAC
13441  ATGACCGCGC GCAACATGGA ACCGGGCATG TACGCCGCGC ACCGGCCTTA CATCAACCGC
13501  CTGATGGACT ACCTGCATCG CGCGGCGGCC GTGAACCCCG AGTACTTTAC CAACGCCATC
13561  CTGAACCCGC ACTGGCTCCC GCCGCCCGGG TTCTACAGCG GGGGCTTCGA GGTCCCGGAG
13621  GCCAACGATG GCTTCCTGTG GGACGACATG GACGACAGCG TGTTCTCCCC GCGGCCGCAG
13681  GCGCTGGCGG AAGCGTCCCT GCTGCGTCCC AAGAAGGAGG AGGAGGAGGC GAGTCGCCGC
13741  CGCGGCAGCA GCGGCGTGGC TTCTCTGTCC GAGCTGGGGG CGGCAGCCGC CGCGCGCCCC
13801  GGGTCCCTGG GCGGCAGCCC CTTTCCGAGC CTGGTGGGGT CTCTGCACAG CGAGCGCACC
13861  ACCCGCCCTC GGCTGCTGGG CGAGGACGAG TACCTGAATA ACTCCCTGCT GCAGCCGGTG
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FIG. 5D

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13921  CGGGAGAAAA ACCTGCCCCC CGCCTTCCCC AACAACGGGA TAGAGAGCCT GGTGGACAAG
13981  ATGAGCAGAT GGAAGACCTA TGCGCAGGAG CACAGGGACG CGCCCGCGCT CCGGCCGCCC
14041  ACGCGGCGCC AGCGCCACGA CCGGCAGCGG GGGCTGGTGT GGGATGACGA GGACTCCGCG
14101  GACGATAGCA GCGTGCTGGA CCTGGGAGGG AGCGGCAACC CGTTCGCGCA CCTGCGCCCC
14161  CGCCTGGGGA GGATGTTTTA AAAAAAAAAA AAGCAAGAAG CATGATGCAA AATTAAATAA
14221  AACTCACCAA GGCCATGGCG ACCGAGCGTT GGTTTCTTGT GTTCCCTTCA GTATGCGGCG
14281  CGCGGCGATG TACCAGGAGG GACCTCCTCC CTCTTACGAG AGCGTGGTGG GCGCGGCGGC
14341  GGCGGCGCCC TCTTCTCCCT TTGCGTCGCA GCTGCTGGAG CCGCCGTACG TGCCTCCGCG
14401  CTACCTGCGG CCTACGGGGG GGAGAAACAG CATCCGTTAC TCGGAGCTGG CGCCCCTGTT
14461  CGACACCACC CGGGTGTACC TGGTGGACAA CAAGTCGGCG GACGTGGCCT CCCTGAACTA
14521  CCAGAACGAC CACAGCAATT TTTTGACCAC GGTCATCCAG AACAATGACT ACAGCCCGAG
14581  CGAGGCCAGC ACCCAGACCA TCAATCTGGA TGACCGGTCG CACTGGGGCG GCGACCTGAA
14641  AACCATCCTG CACACCAACA TGCCCAACGT GAACGAGTTC ATGTTCACCA ATAAGTTCAA
14701  GGCGCGGGTG ATGGTGTCGC GCTCGCACAC CAAGGAAGAC CGGGTGGAGC TGAAGTACGA
14761  GTGGGTGGAG TTCGAGCTGC CAGAGGGCAA CTACTCCGAG ACCATGACCA TTGACCTGAT
14821  GAACAACGCG ATCGTGGAGC ACTATCTGAA AGTGGGCAGG CAAAACGGGG TCCTGGAGAG
14881  CGACATCGGG GTCAAGTTCG ACACCAGGAA CTTCCGCCTG GGGCTGGACC CCGTGACCGG
14941  GCTGGTTATG CCCGGGGTGT ACACCAACGA GGCCTTCCAT CCCGACATCA TCCTGCTGCC
15001  CGGCTGCGGG GTGGACTTCA CTTACAGCCG CCTGAGCAAC CTCCTGGGCA TCCGCAAGCG
15061  GCAGCCCTTC CAGGAGGGCT TCAGGATCAC CTACGAGGAC CTGGAGGGGG GCAACATCCC
15121  CGCGCTCCTC GATGTGGAGG CCTACCAGGA TAGCTTGAAG GAAAATGAGG CGGGACAGGA
15181  GGATACCACC CCCGCCGCCT CCGCCGCCGC CGAGCAGGGC GAGGATGCTG CTGACACCGC
15241  GGCCGCGGAC GGGGCAGAGG CCGACCCCGC TATGGTGGTG GAGGCTCCCG AGCAGGAGGA
15301  GGATATGAAT GACAGTGCGG TGCGCGGAGA CACCTTCGTC ACCCGGGGGG AGGAAAAGCA
15361  AGCGGAGGCC GAGGCCGCGG CCGAGGAAAA GCAACTGGCG GCAGCAGCGG CGGCGGCGGC
15421  GTTGGCCGCG GCGGAGGCTG AGTCTGAGGG GACCAAGCCC GCCAAGGAGC CCGTGATTAA
15481  GCCCCTGACC GAAGATAGCA AGAAGCGCAG TTACAACCTG CTCAAGGACA GCACCAACAC
15541  CGCGTACCGC AGCTGGTACC TGGCCTACAA CTACGGCGAC CCGTCGACGG GGGTGCGCTC
15601  CTGGACCCTG CTGTGCACGC CGGACGTGAC CTGCGGCTCG GAGCAGGTGT ACTGGTCGCT
15661  GCCCGACATG ATGCAAGACC CCGTGACCTT CCGCTCCACG CGGCAGGTCA GCAACTTCCC
15721  GGTGGTGGGC GCCGAGCTGC TGCCCGTGCA CTCCAAGAGC TTCTACAACG ACCAGGCCGT
15781  CTACTCCCAG CTCATCCGCC AGTTCACCTC TCTGACCCAC GTGTTCAATC GCTTTCCTGA
15841  GAACCAGATT CTGGCGCGCC CGCCCGCCCC CACCATCACC ACCGTCAGTG AAAACGTTCC
15901  TGCTCTCACA GATCACGGGA CGCTACCGCT GCGCAACAGC ATCGGAGGAG TCCAGCGAGT
15961  GACCGTTACT GACGCCAGAC GCCGCACCTG CCCCTACGTT TACAAGGCCT TGGGCATAGT
16021  CTCGCCGCGC GTCCTTTCCA GCCGCACTTT TTGAGCAACA CCACCATCAT GTCCATCCTG
16081  ATCTCACCCA GCAATAACTC CGGCTGGGGA CTGCTGCGCG CGCCCAGCAA GATGTTCGGA
16141  GGGGCGAGGA AGCGTTCCGA GCAGCACCCC GTGCGCGTGC GCGGGCACTT CCGCGCCCCC
16201  TGGGGAGCGC ACAAACGCGG CCGCGCGGGG CGCACCACCG TGGACGACGC CATCGACTCG
16261  GTGGTGGAGC AGGCGCGCAA CTACAGGCCC GCGGTCTCTA CCGTGGACGC GGCCATCCAG
16321  ACCGTGGTGC GGGGCGCGCG GCGGTACGCC AAGCTGAAGA GCCGCCGGAA GCGCGTGGCC
16381  CGCCGCCACC GCCGCCGACC CGGGGCCGCC GCCAAACGCG CCGCCGCGGC CCTGCTTCGC
16441  CGGGCCAAGC GCACGGGCCG CCGCGCCGCC ATGAGGGCCG CGCGCCGCTT GGCCGCCGGC
16501  ATCACCGCCG CCACCATGGC CCCCCGTACC CGAAGACGCG CGGCCGCCGC CGCCGCCGCC
16561  GCCATCAGTG ACATGGCCAG CAGGCGCCGG GGCAACGTGT ACTGGGTGCG CGACTCGGTG
16621  ACCGGCACGC GCGTGCCCGT GCGCTTCCGC CCCCCGCGGA CTTGAGATGA TGTGAAAAAA
16681  CAACACTGAG TCTCCTGCTG TTGTGTGTAT CCCAGCGGCG GCGGCGCGCG CAGCGTCATG
16741  TCCAAGCGCA AAATCAAAGA AGAGATGCTC CAGGTCGTCG CGCCGGAGAT CTATGGGCCC
16801  CCGAAGAAGG AAGAGCAGGA TTCGAAGCCC CGCAAGATAA AGCGGGTCAA AAAGAAAAAG
16861  AAAGATGATG ACGATGCCGA TGGGGAGGTG GAGTTCCTGC GCGCCACGGC GCCCAGGCGC
16921  CCGGTGCAGT GGAAGGGCCG GCGCGTAAAG CGCGTCCTGC GCCCCGGCAC CGCGGTGGTC
16981  TTCACGCCCG GCGAGCGCTC CACCCGGACT TTCAAGCGCG TCTATGACGA GGTGTACGGC
17041  GACGAAGACC TGCTGGAGCA GGCCAACGAG CGCTTCGGAG AGTTTGCTTA CGGGAAGCGT
17101  CAGCGGGCGC TGGGGAAGGA GGACCTGCTG GCGCTGCCGC TGGACCAGGG CAACCCCACC
17161  CCCAGTCTGA AGCCCGTGAC CCTGCAGCAG GTGCTGCCGA GCAGCGCACC CTCCGAGGCG
17221  AAGCGGGGTC TGAAGCGCGA GGGCGGCGAC CTGGCGCCCA CCGTGCAGCT CATGGTGCCC
17281  AAGCGGCAGA GGCTGGAGGA TGTGCTGGAG AAAATGAAAG TAGACCCCGG TCTGCAGCCG
17341  GACATCAGGG TCCGTCCCAT CAAGCAGGTG GCGCCGGGCC TCGGCGTGCA GACCGTGGAC
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FIG. 5E

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17401  GTGGTCATCC CCACCGGCAA CTCCCCCGCC GCCACCACCA CTACCGCTGC CTCCACGGAC
17461  ATGGAGACAC AGACCGATCC CGCCGCAGCC GCAGCCGCCG CCGCAGCCGC GACCTCCTCG
17521  GCGGAGGTGC AGACGGACCC CTGGCTGCCG CCGGCGATGT CAGCTCCCCG CGCGCGCCGC
17581  GGACGCAGAA AGTACGGCGC CGCCAACGCG CTCCTGCCCG AGTACGCCTT GCATCCTTCC
17641  ATCGCGCCCA CCCCCGGCTA CCGAGGCTAT ACCTACCGCC CGCGAAGAGC CAAGGGTTCC
17701  ACCCGCCGTC CCCGCCGACG CGCCGCCGCC ACCACCCGCC GCCGCCGCCG CAGACGCCAG
17761  CCCGCACTGG CTCCAGTCTC CGTGAGGAGA GTGGCGCGCG ACGGACACAC CCTGGTGCTG
17821  CCCAGGGCGC GCTACCACCC CAGCATCGTT TAAAAGCCTG TTGTGGTTCT TGCAGATATG
17881  GCCCTCACTT GCCGCCTCCG TTTCCCGGTG CCGGGATACC GAGGAGGAAG ATCGCGCCGC
17941  AGGAGGGGTC TGGCCGGCCG CGGCCTGAGC GGAGGCAGCC GCCGCGCGCA CCGGCGGCGA
18001  CGCGCCACCA GCCGACGCAT GCGCGGCGGG GTGCTGCCCC TGTTAATCCC CCTGATCGCC
18061  GCGGCGATCG GCGCCGTGCC CGGGATCGCC TCCGTGGCCT TGCAAGCGTC CCAGAGGCAT
18121  TGACAGACTT GCAAACTTGC AAATATGGAA AAAAAAAAAA AACCCCAATA AAAAGTCTAG
18181  ACTCTCACGC TCGCTTGGTC CTGTGACTAT TTTGTAGAAT GGAAGACATC AACTTTGCGT
18241  CGCTGGCCCC GCGTCACGGC TCGCGCCCGT TCCTGGGACA CTGGAACGAT ATCGGCACCA
18301  GCAACATGAG CGGTGGCGCC TTCAGTTGGG GCTCTCTGTG GAGCGGCATT AAAAGTATCG
18361  GGTCTGCCGT TAAAAATTAC GGCTCCCGGG CCTGGAACAG CAGCACGGGC CAGATGTTGA
18421  GAGACAAGTT GAAAGAGCAG AACTTCCAGC AGAAGGTGGT GGAGGGCCTG GCCTCCGGCA
18481  TCAACGGGGT GGTGGACCTG GCCAACCAGG CCGTGCAGAA TAAAATCAAC AGCAGACTGG
18541  ACCCCCGGCC GCCGGTGGAG GAGGTGCCGC CGGCGCTGGA GACGGTGTCC CCCGATGGGC
18601  GTGGCGAGAA GCGCCCGCGG CCCGATAGGG AAGAGACCAC TCTGGTCACG CAGACCGATG
18661  AGCCGCCCCC GTATGAGGAG GCCCTAAAGC AAGGTCTGCC CACCACGCGG CCCATCGCGC
18721  CCATGGCCAC CGGGGTGGTG GGCCGCCACA CCCCCGCCAC GCTGGACTTG CCTCCGCCCG
18781  CCGATGTGCC GCAGCAGCAG AAGGCGGCAC AGCCGGGCCC GCCCGCGACC GCCTCCCGTT
18841  CCTCCGCCGG TCCTCTGCGC CGCGCGGCCA GCGGCCCCCG CGGGGGGGTC GCGAGGCACG
18901  GCAACTGGCA GAGCACGCTG AACAGCATCG TGGGTCTGGG GGTGCGGTCC GTGAAGCGCC
18961  GCCGATGCTA CTGAATAGCT TAGCTAACGT GTTGTATGTG TGTATGCGCC CTATGTCGCC
19021  GCCAGAGGAG CTGCTGAGTC GCCGCCGTTC GCGCGCCCAC CACCACCGCC ACTCCGCCCC
19081  TCAAGATGGC GACCCCATCG ATGATGCCGC AGTGGTCGTA CATGCACATC TCGGGCCAGG
19141  ACGCCTCGGA GTACCTGAGC CCCGGGCTGG TGCAGTTCGC CCGCGCCACC GAGAGCTACT
19201  TCAGCCTGAG TAACAAGTTT AGGAACCCCA CGGTGGCGCC CACGCACGAT GTGACCACCG
19261  ACCGGTCTCA GCGCCTGACG CTGCGGTTCA TTCCCGTGGA CCGCGAGGAC ACCGCGTACT
19321  CGTACAAGGC GCGGTTCACC CTGGCCGTGG GCGACAACCG CGTGCTGGAC ATGGCCTCCA
19381  CCTACTTTGA CATCCGCGGG GTGCTGGACC GGGGTCCCAC TTTCAAGCCC TACTCTGGCA
19441  CCGCCTACAA CTCCCTGGCC CCCAAGGGCG CTCCCAACTC CTGCGAGTGG GAGCAAGAGG
19501  AAACTCAGGC AGTTGAAGAA GCAGCAGAAG AGGAAGAAGA AGATGCTGAC GGTCAAGCTG
19561  AGGAAGAGCA AGCAGCTACC AAAAAGACTC ATGTATATGC TCAGGCTCCC CTTTCTGGCG
19621  AAAAAATTAG TAAAGATGGT CTGCAAATAG GAACGGACGC TACAGCTACA GAACAAAAAC
19681  CTATTTATGC AGACCCTACA TTCCAGCCCG AACCCCAAAT CGGGGAGTCC CAGTGGAATG
19741  AGGCAGATGC TACAGTCGCC GGCGGTAGAG TGCTAAAGAA ATCTACTCCC ATGAAACCAT
19801  GCTATGGTTC CTATGCAAGA CCCACAAATG CTAATGGAGG TCAGGGTGTA CTAACGGCAA
19861  ATGCCCAGGG ACAGCTAGAA TCTCAGGTTG AAATGCAATT CTTTTCAACT TCTGAAAACG
19921  CCCGTAACGA GGCTAACAAC ATTCAGCCCA AATTGGTGCT GTATAGTGAG GATGTGCACA
19981  TGGAGACCCC GGATACGCAC CTTTCTTACA AGCCCGCAAA AAGCGATGAC AATTCAAAAA
20041  TCATGCTGGG TCAGCAGTCC ATGCCCAACA GACCTAATTA CATCGGCTTC AGAGACAACT
20101  TTATCGGCCT CATGTATTAC AATAGCACTG GCAACATGGG AGTGCTTGCA GGTCAGGCCT
20161  CTCAGTTGAA TGCAGTGGTG GACTTGCAAG ACAGAAACAC AGAACTGTCC TACCAGCTCT
20221  TGCTTGATTC CATGGGTGAC AGAACCAGAT ACTTTTCCAT GTGGAATCAG GCAGTGGACA
20281  GTTATGACCC AGATGTTAGA ATTATTGAAA ATCATGGAAC TGAAGACGAG CTCCCCAACT
20341  ATTGTTTCCC TCTGGGTGGC ATAGGGGTAA CTGACACTTA CCAGGCTGTT AAAACCAACA
20401  ATGGCAATAA CGGGGGCCAG GTGACTTGGA CAAAAGATGA AACTTTTGCA GATCGCAATG
20461  AAATAGGGGT GGGAAACAAT TTCGCTATGG AGATCAACCT CAGTGCCAAC CTGTGGAGAA
20521  ACTTCCTGTA CTCCAACGTG GCGCTGTACC TACCAGACAA GCTTAAGTAC AACCCCTCCA
20581  ATGTGGACAT CTCTGACAAC CCCAACACCT ACGATTACAT GAACAAGCGA GTGGTGGCCC
20641  CGGGGCTGGT GGACTGCTAC ATCAACCTGG GCGCGCGCTG GTCGCTGGAC TACATGGACA
20701  ACGTCAACCC CTTCAACCAC CACCGCAATG CGGGCCTGCG CTACCGCTCC ATGCTCCTGG
20761  GCAACGGGCG CTACGTGCCC TTCCACATCC AGGTGCCCCA GAAGTTCTTT GCCATCAAGA
20821  ACCTCCTCCT CCTGCCGGGC TCCTACACCT ACGAGTGGAA CTTCAGGAAG GATGTCAACA
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FIG. 5F

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20881  TGGTCCTCCA GAGCTCTCTG GGTAACGATC TCAGGGTGGA CGGGGCCAGC ATCAAGTTCG
20941  AGAGCATCTG CCTCTACGCC ACCTTCTTCC CCATGGCCCA CAACACGGCC TCCACGCTCG
21001  AGGCCATGCT CAGGAACGAC ACCAACGACC AGTCCTTCAA TGACTACCTT TCCGCCGCCA
21061  ACATGCTCTA CCCCATACCC GCCAACGCCA CCAACGTCCC CATCTCCATC CCCTCGCGCA
21121  ACTGGGCGGC CTTCCGCGGC TGGGCCTTCA CCCGCCTCAA GACCAAGGAG ACCCCCTCCC
21181  TGGGCTCGGG ATTCGACCCC TACTACACCT ACTCGGGCTC TATTCCCTAC CTGGACGGCA
21241  CCTTCTACCT CAACCACACT TTCAAGAAGG TCTCGGTCAC CTTCGACTCC TCGGTCAGCT
21301  GGCCGGGCAA CGACCGTCTG CTCACCCCCA ACGAGTTCGA GATCAAGCGC TCGGTCGACG
21361  GGGAAGGCTA CAACGTGGCC CAGTGCAACA TGACCAAGGA CTGGTTCCTG GTCCAGATGC
21421  TGGCCAACTA CAACATCGGC TACCAGGGCT TCTACATCCC AGAGAGCTAC AAGGACAGGA
21481  TGTACTCCTT CTTCAGGAAC TTCCAGCCCA TGAGCCGGCA GGTGGTGGAC CAGACCAAGT
21541  ACAAGGACTA CCAGGAGGTG GGCATCATCC ACCAGCACAA CAACTCGGGC TTCGTGGGCT
21601  ACCTCGCCCC CACCATGCGC GAGGGACAGG CCTACCCCGC CAACTTCCCC TACCCGCTCA
21661  TAGGCAAGAC CGCGGTCGAC AGCATCACCC AGAAAAAGTT CCTCTGCGAC CGCACCCTCT
21721  GGCGCATCCC CTTCTCCAGC AACTTCATGT CCATGGGTGC GCTCTCGGAC CTGGGCCAGA
21781  ACTTGCTCTA CGCCAACTCC GCCCACGCCC TCGACATGAC CTTCGAGGTC GACCCCATGG
21841  ACGAGCCCAC CCTTCTCTAT GTTCTGTTCG AAGTCTTTGA CGTGGTCCGG GTCCACCAGC
21901  CGCACCGCGG CGTCATCGAG ACCGTGTACC TGCGTACGCC CTTCTCGGCC GGCAACGCCA
21961  CCACCTAAAG AAGCAAGCCG CAGTCATCGC CGCCTGCATG CCGTCGGGTT CCACCGAGCA
22021  AGAGCTCAGG GCCATCGTCA GAGACCTGGG ATGCGGGCCC TATTTTTTGG GCACCTTCGA
22081  CAAGCGCTTC CCTGGCTTTG TCTCCCCACA CAAGCTGGCC TGCGCCATCG TCAACACGGC
22141  CGGCCGCGAG ACCGGGGGCG TGCACTGGCT GGCCTTTGCC TGGAACCCGC GCTCCAAAAC
22201  ATGCTTCCTC TTTGACCCCT TCGGCTTTTC GGACCAGCGG CTCAAGCAAA TCTACGAGTT
22261  CGAGTACGAG GGCTTGCTGC GTCGCAGCGC CATCGCCTCC TCGCCCGACC GCTGCGTCAC
22321  CCTCGAAAAG TCCACCCAGA CCGTGCAGGG GCCCGACTCG GCCGCCTGCG GTCTCTTCTG
22381  CTGCATGTTT CTGCACGCCT TTGTGCACTG GCCTCAGAGT CCCATGGACC GCAACCCCAC
22441  CATGAACTTG CTGACGGGGG TGCCCAACTC CATGCTCCAA AGCCCCCAGG TCGAGCCCAC
22501  CCTGCGCCGC AACCAGGAGC AGCTCTACAG CTTCCTGGAG CGCCACTCGC CCTACTTCCG
22561  CCGCCACAGC GCACAGATCA GGAGGGCCAC CTCCTTCTGC CACTTGCAAG AGATGCAAGA
22621  AGGGTAATAA CGATGTACAC ACTTTTTTCT CAATAAATGG CATTTTTTTT TTATTTATAC
22681  AAGCTCTCTG GGGTATTCAT TTCCCACCAC CACCACCCGC CGTTGTCGCC ATCTGGCTCT
22741  ATTTAGAAAT CGAAAGGGTT CTGCCGGGAG TCGCCGTGCG CCACGGGCAG GGACACGTTG
22801  CGATACTGGT AGCGGGTGCC CCACTTGAAC TCGGGCACCA CCAGGCGAGG CAGCTCGGGG
22861  AAGTTTTCGC TCCACAGGCT GCGGGTCAGC ACCAGCGCGT TCATCAGGTC GGGCGCCGAG
22921  ATCTTGAAGT CGCAGTTGGG GCCGCCGCCC TGCGCGCGCG AGTTGCGGTA CACCGGGTTG
22981  CAGCACTGGA ACACCAACAG CGCCGGGTGC TTCACGCTGG CCAGCACGCT GCGGTCGGAG
23041  ATCAGCTCGG CGTCCAGGTC CTCCGCGTTG CTCAGCGCGA ACGGGGTCAT CTTGGGCACT
23101  TGCCGCCCCA GGAAGGGCGC GTGCCCCGGT TTCGAGTTGC AGTCGCAGCG CAGCGGGATC
23161  AGCAGGTGCC CGTGCCCGGA CTCGGCGTTG GGGTACAGCG CGCGCATGAA GGCCTGCATC
23221  TGGCGGAAGG CCATCTGGGC CTTGGCGCCC TCCGAGAAGA ACATGCCGCA GGACTTGCCC
23281  GAGAACTGGT TTGCGGGGCA GCTGGCGTCG TGCAGGCAGC AGCGCGCGTC GGTGTTGGCG
23341  ATCTGCACCA CGTTGCGCCC CCACCGGTTC TTCACGATCT TGGCCTTGGA CGATTGCTCC
23401  TTCAGCGCGC GCTGCCCGTT CTCGCTGGTC ACATCCATCT CGATCACATG TTCCTTGTTC
23461  ACCATGCTGC TGCCGTGCAG ACACTTCAGC TCGCCCTCCG TCTCGGTGCA GCGGTGCTGC
23521  CACAGCGCGC AGCCCGTGGG CTCGAAAGAC TTGTAGGTCA CCTCCGCGAA GGACTGCAGG
23581  TACCCCTGCA AAAAGCGGCC CATCATGGTC ACGAAGGTCT TGTTGCTGCT GAAGGTCAGC
23641  TGCAGCCCGC GGTGCTCCTC GTTCAGCCAG GTCTTGCACA CGGCCGCCAG CGCCTCCACC
23701  TGGTCGGGCA GCATCTTGAA GTTCACCTTC AGCTCATTCT CCACGTGGTA CTTGTCCATC
23761  AGCGTGCGCG CCGCCTCCAT GCCCTTCTCC CAGGCCGACA CCAGCGGCAG GCTCACGGGG
23821  TTCTTCACCA TCACCGTGGC CGCCGCCTCC GCCGCGCTTT CGCTTTCCGC CCCGCTGTTC
23881  TCTTCCTCTT CCTCCTCTTC CTCGCCGCCG CCCACTCGCA GCCCCCGCAC CACGGGGTCG
23941  TCTTCCTGCA GGCGCTGCAC CTTGCGCTTG CCGTTGCGCC CCTGCTTGAT GCGCACGGGC
24001  GGGTTGCTGA AGCCCACCAT CACCAGCGCG GCCTCTTCTT GCTCGTCCTC GCTGTCCAGA
24061  ATGACCTCCG GGGAGGGGGG GTTGGTCATC CTCAGTACCG AGGCACGCTT CTTTTTCTTC
24121  CTGGGGGCGT TCGCCAGCTC CGCGGCTGCG GCCGCTGCCG AGGTCGAAGG CCGAGGGCTG
24181  GGCGTGCGCG GCACCAGCGC GTCTTGCGAG CCGTCCTCGT CCTCCTCGGA CTCGAGACGG
24241  AGGCGGGCCC GCTTCTTCGG GGGCGCGCGG GGCGGCGGAG GCGGCGGCGG CGACGGAGAC
24301  GGGGACGAGA CATCGTCCAG GGTGGGTGGA CGGCGGGCCG CGCCGCGTCC GCGCTCGGGG
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FIG. 5C

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24361  GTGGTTTCGC GCTGGTCCTC TTCCCGACTG GCCATCTCCC ACTGCTCCTT CTCCTATAGG
24421  CAGAAAGAGA TCATGGAGTC TCTCATGCGA GTCGAGAAGG AGGAGGACAG CCTAACCGCC
24481  CCCTCTGAGC CCTCCACCAC CGCCGCCACC ACCGCCAATG CCGCCGCGGA CGACGCGCCC
24541  ACCGAGACCA CCGCCAGTAC CACCCTCCCC AGCGACGCAC CCCCGCTCGA GAATGAAGTG
24601  CTGATCGAGC AGGACCCGGG TTTTGTGAGC GGAGAGGAGG ATGAGGTGGA TGAGAAGGAG
24661  AAGGAGGAGG TCGCCGCCTC AGTGCCAAAA GAGGATAAAA AGCAAGACCA GGACGACGCA
24721  GATAAGGATG AGACAGCAGT CGGGCGGGGG AACGGAAGCC ATGATGCTGA TGACGGCTAC
24781  CTAGACGTGG GAGACGACGT GCTGCTTAAG CACCTGCACC GCCAGTGCGT CATCGTCTGC
24841  GACGCGCTGC AGGAGCGCTG CGAAGTGCCC CTGGACGTGG CGGAGGTCAG CCGCGCCTAC
24901  GAGCGGCACC TCTTCGCGCC GCACGTGCCC CCCAAGCGCC GGGAGAACGG CACCTGCGAG
24961  CCCAACCCGC GTCTCAACTT CTACCCGGTC TTCGCGGTAC CCGAGGTGCT GGCCACCTAC
25021  CACATCTTCT TCCAAAACTG CAAGATCCCC CTCTCCTGCC GCGCTAACCG CACCCGCGCC
25081  GACAAAACCC TGACCCTGCG GCAGGGCGCC CACATACCTG ATATTGCCTC TCTGGAGGAA
25141  GTGCCCAAGA TCTTCGAGGG TCTCGGTCGC GACGAGAAAC GGGCGGCGAA CGCTCTGCAC
25201  GGAGACAGCG AAAACGAGAG TCACTCGGGG GTGCTGGTGG AGCTCGAGGG CGACAACGCG
25261  CGCCTGGCCG TACTCAAGCG CAGCATAGAG GTCACCCACT TTGCCTACCC GGCGCTCAAC
25321  CTGCCCCCCA AGGTCATGAG TGTGGTCATG GGCGAGCTCA TCATGCGCCG CGCTCAGCCC
25381  CTGGCCGCGG ATGCAAACTT GCAAGAGTCC TCCGAGGAAG GCCTGCCCGC GGTCAGCGAC
25441  GAGCAGCTAG CGCGCTGGCT GGAGACCCGC GACCCCGCGC AGCTGGAGGA GCGGCGCAAG
25501  CTCATGATGG CCGCGGTGCT GGTCACCGTG GAGCTCGAGT GTCTGCAGCG CTTCTTCGCG
25561  GACCCCGAGA TGCAGCGCAA GCTCGAGGAG ACCCTGCACT ACACCTTCCG CCAGGGCTAC
25621  GTGCGCCAGG CCTGCAAGAT CTCCAACGTG GAGCTCTGCA ACCTGGTCTC CTACCTGGGC
25681  ATCCTGCACG AGAACCGCCT CGGGCAGAAC GTCCTGCACT CCACCCTCAA AGGGGAGGCG
25741  CGCCGCGACT ACATCCGCGA CTGCGCCTAC CTCTTCCTCT GCTACACCTG GCAGACGGCC
25801  ATGGGGGTCT GGCAGCAGTG CCTGGAGGAG CGCAACCTCA AGGAGCTGGA AAAGCTACTC
25861  AAGCGCACCC TCAGGGACCT CTGGACGGGC TTCAACGAGC GCTCGGTGGC CGCCGCGCTG
25921  GCGGACATCA TCTTCCCCGA GCGCCTGCTC AAGACCCTGC AGCAGGGCCT GCCCGACTTC
25981  ACCAGCCAGA GCATGCTGCA GAACTTTAGG ACTTTCATCC TGGAGCGCTC GGGCATCCTG
26041  CCTGCCACTT GCTGCGCGCT GCCCAGCGAC TTCGTGCCCA TCAAGTACAG GGAGTGCCCG
26101  CCGCCGCTCT GGGGCCACTG CTACCTCTTC CAGCTGGCCA ACTACCTCGC CTACCACTCG
26161  GACCTCATGG AAGACGTGAG CGGCGAGGGC CTGCTCGAGT GCCACTGCCG CTGCAACCTC
26221  TGCACGCCCC ACCGCTCTCT AGTCTGCAAC CCGCAGCTGC TCAGCGAGAG TCAGATTATC
26281  GGTACCTTCG AGCTGCAGGG TCCCTCGCCT GACGAGAAGT CCGCGGCTCC GGGGCTGAAA
26341  CTCACTCCGG GGCTGTGGAC TTCCGCCTAC CTACGCAAAT TTGTACCTGA GGACTACCAC
26401  GCCCACGAGA TCAGGTTCTA CGAAGACCAA TCCCGCCCGC CCAAGGCGGA GCTCACCGCC
26461  TGCGTCATCA CCCAGGGGCA CATCCTGGGC CAATTGCAAG CCATCAACAA AGCCCGCCGA
26521  GAGTTCTTGC TGAAAAAGGG TCGGGGGGGTG TACCTGGACC CCCAGTCCGG CGAGGAGCTA
26581  AACCCGCTAC CCCCGCCGCC GCCCCAGCAG CGGGACCTTG CTTCCCAGGA TGGCACCCAG
26641  AAAGAAGCAG CAGCCGCCGC CGCCGCAGCC ATACATGCTT CTGGAGGAAG AGGAGGAGGA
26701  CTGGGACAGT CAGGCAGAGG AGGTTTCGGA CGAGGAGCAG GAGGAGATGA TGGAAGACTG
26761  GGAGGAGGAC AGCAGCCTAG ACGAGGAAGC TTCAGAGGCC GAAGAGGTGG CAGACGCAAC
26821  ACCATCACCC TCGGTCGCAG CCCCCTCGCC GGGGCCCCTG AAATCCTCCG AACCCAGCAC
26881  CAGCGCTATA ACCTCCGCTC CTCCGGCGCC GGCGCCACCC GCCCGCAGAC CCAACCGTAG
26941  ATGGGACACC ACAGGAACCG GGGTCGGTAA GTCCAAGTGC CCGCCGCCGC CACCGCAGCA
27001  GCAGCAGCAG CGCCAGGGCT ACCGCTCGTG GCGCGGGCAC AAGAACGCCA TAGTCGCCTG
27061  CTTGCAAGAC TGCGGGGGCA ACATCTCTTT CGCCCGGCGC TTCCTGCTAT TCCACCACGG
27121  GGTCGCCTTT CCCCGCAATG TCCTGCATTA CTACCGTCAT CTCTACAGCC CCTACTGCAG
27181  CGGCGACCCA GAGGCGGCAG CGGCAGCCAC AGCGGCGACC ACCACCTAGG AAGATATCCT
27241  CCGCGGGCAA GACAGCGGCA GCAGCGGCCA GGAGACCCGC GGCAGCAGCG GCGGGAGCGG
27301  TGGGCGCACT GCGCCTCTCG CCCAACGAAC CCCTCTCGAC CCGGGAGCTC AGACACAGGA
27361  TCTTCCCCAC TTTGTATGCC ATCTTCCAAC AGAGCAGAGG CCAGGAGCAG GAGCTGAAAA
27421  TAAAAAACAG ATCTCTGCGC TCCCTCACCC GCAGCTGTCT GTATCACAAA AGCGAAGATC
27481  AGCTTCGGCG CACGCTGGAG GACGCGGAGG CACTCTTCAG CAAATACTGC GCGCTCACTC
27541  TTAAAGACTA GCTCCGCGCC CTTCTCGAAT TTAGGCGGGA GAAAACTACG TCATCGCCGG
27601  CCGCCGCCCA GCCCGCCCAG CCGAGATGAG CAAAGAGATT CCCACGCCAT ACATGTGGAG
27661  CTACCAGCCG CAGATGGGAC TCGCGGCGGG AGCGGCCCAG GACTACTCCA CCCGCATGAA
27721  CTACATGAGC GCGGGACCCC ACATGATCTC ACAGGTCAAC GGGATCCGCG CCCAGCGAAA
27781  CCAAATACTG CTGGAACAGG CGGCCATCAC CGCCACGCCC CGCCATAATC TCAACCCCCG
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FIG. 5H

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27841  AAATTGGCCC GCCGCCCTCG TGTACCAGGA AACCCCCTCC GCCACCACCG TACTACTTCC
27901  GCGTGACGCC CAGGCCGAAG TCCAGATGAC TAACTCAGGG GCGCAGCTCG CGGGCGGCTT
27961  TCGTCACGGG GCGCGGCCGC TCCGACCAGG TATAAGACAC CTGATGATCA GAGGCCGAGG
28021  TATCCAGCTC AACGACGAGT CGGTGAGCTC TTCGCTCGGT CTCCGTCCGG ACGGAACTTT
28081  CCAGCTCGCC GGATCCGGCC GCTCTTCGTT CACGCCCCGC CAGGCGTACC TGACTCTGCA
28141  GACCTCGTCC TCGGAGCCCC GCTCCGGAGG CATCGGAACC CTCCAGTTCG TGGAGGAGTT
28201  CGTGCCCTCG GTCTACTTCA ACCCCTTCTC GGGACCTCCC GGACGCTACC CCGACCAGTT
28261  CATTCCGAAC TTTGACGCGG TGAAGGACTC GGCGGACGGC TACGACTGAA TGTCAGGTGC
28321  CGAGGCAGAG CAGCTTCGCC TGAGACACCT CGAGCACTGC CGCCGCCACA AGTGCTTCGC
28381  CCGCGGTTCC GGTGAGTTCT GCTACTTTCA GCTACCCGAG GAGCATACCG AGGGGCCGGC
28441  GCACGGCGTC CGCCTGACCA CCCAGGGCGA GGTTACCTGT TCCCTCATCC GGGAGTTCAC
28501  CCTCCGTCCC CTGCTAGTGG AGCGGGAGCG GGGTCCCTGT GTCCTAACTA TCGCCTGCAA
28561  CTGCCCTAAC CCTGGATTAC ATCAAGATCT TTGCTGTCAT CTCTGTGCTG AGTTTAATAA
28621  ACGCTGAGAT CAGAATCTAC TGGGGCTCCT GTCGCCATCC TGTGAACGCC ACCGTCTTCA
28681  CCCACCCCGA CCAGGCCCAG GCGAACCTCA CCTGCGGTCT GCATCGGAGG GCCAAGAAGT
28741  ACCTCACCTG GTACTTCAAC GGCACCCCCT TTGTGGTTTA CAACAGCTTC GACGGGGACG
28801  GAGTCTCCCT GAAAGACCAG CTCTCCGGTC TCAGCTACTC CATCCACAAG AACACCACCC
28861  TCCAACTCTT CCCTCCCTAC CTGCCGGGAA CCTACGAGTG CGTCACCGGC CGCTGCACCC
28921  ACCTCACCCG CCTGATCGTA AACCAGAGCT TTCCGGGAAC AGATAACTCC CTCTTCCCCA
28981  GAACAGGAGG TGAGCTCAGG AAACTCCCCG GGGACCAGGG CGGAGACGTA CCTTCGACCC
29041  TTGTGGGGTT AGGATTTTTT ATTACCGGGT TGCTGGCTCT TTTAATCAAA GCTTCCTTGA
29101  GATTTGTTCT TTCCTTCTAC GTGTATGAAC ACCTCAGCCT CCAATAACTC TACCCTTTCT
29161  TCGGAATCAG GTGACTTCTC TGAAATCGGG CTTGGTGTGC TGCTTACTCT GTTGATTTTT
29221  TTCCTTATCA TACTCAGCCT TCTGTGCCTC AGGCTCGCCG CCTGCTGCGC ACACATCTAT
29281  ATCTACTGCT GGTTGCTCAA GTGCAGGGGT CGCCACCCAA GATGAACAGG TACATGGTCC
29341  TATCGATCCT AGGCCTGCTG GCCCTGGCGG CCTGCAGCGC CGCCAAAAAA GAGATTACCT
29401  TTGAGGAGCC CGCTTGCAAT GTAACTTTCA AGCCCGAGGG TGACCAATGC ACCACCCTCG
29461  TCAAATGCGT TACCAATCAT GAGAGGCTGC GCATCGACTA CAAAAACAAA ACTGGCCAGT
29521  TTGCGGTCTA TAGTGTGTTT ACGCCCGGAG ACCCCTCTAA CTACTCTGTC ACCGTCTTCC
29581  AGGGCGGACA GTCTAAGATA TTCAATTACA CTTTCCCTTT TTATGAGTTA TGCGATGCGG
29641  TCATGTACAT GTCAAAACAG TACAACCTGT GGCCTCCCTC TCCCCAGGCG TGTGTGGAAA
29701  ATACTGGGTC TTACTGCTGT ATGGCTTTGG CAATCACTAC GCTCGCTCTA ATCTGCACGG
29761  TGCTATACAT AAAATTCAGG CAGAGGCGAA TCTTTATCGA TGAAAAGAAA ATGCCTTGAT
29821  CGCTAACACC GGCTTTCTAT CTGCAGAATG AATGCAATCA CCTCCCTACT AATCACCACC
29881  ACCCTCCTTG CGATTGCCCA TGGGTTGACA CGAATCGAAG TGCCAGTGGG GTCCAATGTC
29941  ACCATGGTGG GCCCCGCCGG CAATTCCACC CTCATGTGGG AAAAATTTGT CCGCAATCAA
30001  TGGGTTCATT TCTGCTCTAA CCGAATCAGT ATCAAGCCCA GAGCCATCTG CGATGGGCAA
30061  AATCTAACTC TGATCAATGT GCAAATGATG GATGCTGGGT ACTATTACGG GCAGCGGGGA
30121  GAAATCATTA ATTACTGGCG ACCCCACAAG GACTACATGC TGCATGTAGT CGAGGCACTT
30181  CCCACTACCA CCCCCACTAC CACCTCTCCC ACCACCACTA CCACCACTAC TACTACTACT
30241  ACTACCACTA CCGCTGCCCG CCATACCCGC AAAAGCACCA TGATTAGCAC AAAGCCCCCT
30301  CGTGCTCACT CCCACGCCGG CGGGCCCATC GGTGCGACCT CAGAAACCAC CGAGCTTTGC
30361  TTCTGCCAAT GCACTAACGC CAGCGCTCAT GAACTGTTCG ACCTGGAGAA TGAGGATGCC
30421  CAGCAGAGCT CCGCTTGCCT GACCCAGGAG GCTGTGGAGC CCGTTGCCCT GAAGCAGATC
30481  GGTGATTCAA TAATTGACTC TTCTTCTTTT GCCACTCCCG AATACCCTCC CGATTCTACT
30541  TTCCACATCA CGGGTACCAA AGACCCTAAC CTCTCTTTCT ACCTGATGCT GCTGCTCTGT
30601  ATCTCTGTGG TCTCTTCCGC GCTGATGTTA CTGGGGATGT TCTGCTGCCT GATCTGCCGC
30661  AGAAAGAGAA AAGCTCGCTC TCAGGGCCAA CCACTGATGC CCTTCCCCTA CCCCCCGGAT
30721  TTTGCAGATA ACAAGATATG AGCTCGCTGC TGACACTAAC CGCTTTACTA GCCTGCGCTC
30781  TAACCCTTGT CGCTTGCGAC TCGAGATTCC ACAATGTCAC AGCTGTGGCA GGAGAAAATG
30841  TTACTTTCAA CTCCACGGCC GATACCCAGT GGTCGTGGAG TGGCTCAGGT AGCTACTTAA
30901  CTATCTGCAA TAGCTCCACT TCCCCCAGCA TATCCCCAAC CAAGTACCAA TGCAATGCCA
30961  GCCTGTTCAC CCTCATCAAC GCTTCCACCC TGGACAATGG ACTCTATGTA GGCTATGTAC
31021  CCTTTGGTGG GCAAGGAAAG ACCCACGCTT ACAACCTGGA AGTTCGCCAG CCCAGAACCA
31081  CTACCCAAGC TTCTCCCACC ACCACCACCA CCACCACCAC CACCATCACC AGCAGCAGCA
31141  GCAGCCACAG CAGCAGCAGC AGATTATTGA CTTTGGTTTT GGCCAGCTCA TCTGCCGCTA
31201  CCCAGGCCAT CTACAGCTCT GTGCCCGAAA CCACTCAGAT CCACCGCCCA GAAACGACCA
31261  CCGCCACCAC CCTACACACC TCCAGCGATC AGATGCCGAC CAACATCACC CCCTTGGCTC
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FIG. 5I

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31321  TTCAAATGGG ACTTACAAGC CCCACTCCAA AACCAGTGGA TGCGGCCGAG GTCTCCGCCC
31381  TCGTCAATGA CTGGGCGGGG CTGGGAATGT GGTGGTTCGC CATAGGCATG ATGGCGCTCT
31441  GCCTGCTTCT GCTCTGGCTC ATCTGCTGCC TCCACCGCAG GCGAGCCAGA CCCCCCATCT
31501  ATAGACCCAT CATTGTCCTG AACCCCGATA ATGATGGGAT CCATAGATTG GATGGCCTGA
31561  AAAACCTACT TTTTTCTTTT ACAGTATGAT AAATTGAGAC ATGCCTCGCA TTTTCTTGTA
31621  CATGTTCCTT CTCCCACCTT TTCTGGGGTG TTCTACGCTG GCCGCTGTGT CTCACCTGGA
31681  GGTAGACTGC CTCTCACCCT TCACTGTCTA CCTGCTTTAC GGATTGGTCA CCCTCACTCT
31741  CATCTGCAGC CTAATCACAG TAATCATCGC CTTCATCCAG TGCATTGATT ACATCTGTGT
31801  GCGCCTCGCA TACTTCAGAC ACCACCCGCA GTACCGAGAC AGGAACATTG CCCAACTTCT
31861  AAGACTGCTC TAATCATGCA TAAGACTGTG ATCTGCCTTC TGATCCTCTG CATCCTGCCC
31921  ACCCTCACCT CCTGCCAGTA CACCACAAAA TCTCCGCGCA AAAGACATGC CTCCTGCCGC
31981  TTCACCCAAC TGTGGAATAT ACCCAAATGC TACAACGAAA AGAGCGAGCT CTCCGAAGCT
32041  TGGCTGTATG GGGTCATCTG TGTCTTAGTT TTCTGCAGCA CTGTCTTTGC CCTCATGATC
32101  TACCCCTACT TTGATTTGGG ATGGAACGCG ATCGATGCCA TGAATTACCC CACCTTTCCC
32161  GCACCCGAGA TAATTCCACT GCGACAAGTT GTACCCGTTG TCGTTAATCA ACGCCCCCCA
32221  TCCCCTACGC CCACTGAAAT CAGCTACTTT AACCTAACAG GCGGAGATGA CTGACGCCCT
32281  AGATCTAGAA ATGGACGGCA TCAGTACCGA GCAGCGTCTC CTAGAGAGGC GCAGGCAGGC
32341  GGCTGAGCAA GAGCGCCTCA ATCAGGAGCT CCGAGATCTC GTTAACCTGC ACCAGTGCAA
32401  AAGAGGCATC TTTTGTCTGG TAAAGCAGGC CAAAGTCACC TACGAGAAGA CCGGCAACAG
32461  CCACCGCCTC AGTTACAAAT TGCCCACCCA GCGCCAGAAG CTGGTGCTCA TGGTGGGTGA
32521  GAATCCCATC ACCGTCACCC AGCACTCGGT AGAGACCGAG GGGTGTCTGC ACTCTCCCTG
32581  TCGGGGTCCA GAAGACCTCT GCACCCTGGT AAAGACCCTG TGCGGTCTCA GAGATTTAGT
32641  CCCCTTTAAC TAATCAAACA CTGGAATCAA TAAAAAGAAT CACTTACTTA AAATCAGACA
32701  GCAGGTCTCT GTCCAGTTTA TTCAGCAGCA CCTCCTTCCC CTCCTCCCAA CTCTGGTACT
32761  CCAAACGCCT TCTGGCGGCA AACTTCCTCC ACACCCTGAA GGGAATGTCA GATTCTTGCT
32821  CCTGTCCCTC CGCACCCACT ATCTTCATGT TGTTGCAGAT GAAGCGCACC AAAACGTCTG
32881  ACGAGAGCTT CAACCCCGTG TACCCCTATG ACACGGAAAG CGGCCCTCCC TCCGTCCCTT
32941  TCCTCACCCC TCCCTTCGTG TCTCCCGATG GATTCCAAGA AAGCCCCCCC GGGGTCCTGT
33001  CTCTGAACCT GGCCGAGCCC CTGGTCACTT CCCACGGCAT GCTCGCCCTG AAAATGGGAA
33061  GTGGCCTCTC CCTGGACGAC GCTGGCAACC TCACCTCTCA AGATATCACC ACCGCTAGCC
33121  CTCCCCTCAA AAAAACCAAG ACCAACCTCA GCCTAGAAAC CTCATCCCCC CTAACTGTAA
33181  GCACCTCAGG CGCCCTCACC GTAGCAGCCG CCGCTCCCCT GGCAGTGGCC GGCACCTCCC
33241  TCACCATGCA ATCAGAGGCC CCCCTGACAG TACAGGATGC AAAACTCACC CTGGCCACCA
33301  AAGGCCCCCT GACCGTGTCT GAAGGCAAAC TGGCCTTGCA AACATCGGCC CCGCTGACGG
33361  CCGCTGACAG CAGCACCCTC ACCGTTAGCG CCACACCACC AATTAATGTA AGCAGTGGAA
33421  GTTTAGGCTT AGACATGGAA GACCCTATGT ATACTCACGA TGGAAAACTG GGAATAAGAA
33481  TTGGGGGTCC ACTAAGAGTA GTAGACAGCT TGCACACACT CACTGTAGTT ACCGGAAATG
33541  GACTAACTGT AGATAACAAT GCCCTCCAAA CTAGAGTTAC GGGCGCCCTA GGTTATGACA
33601  CATCAGGAAA TCTACAATTG AGAGCTGCAG GAGGTATGCG AATTGATGCA AATGGCCAAC
33661  TTATCCTTAA TGTGGCATAC CCATTTGATG CTCAGAACAA TCTCAGCCTT AGACTTGGTC
33721  AGGGACCCCT GTATATAAAC ACAGACCACA ACCTGGATTT GAATTGCAAC AGAGGTCTAA
33781  CCACAACTAC CACCAACAAC ACAAAAAAAC TTGAGACTAA AATTAGCTCA GGCTTAGACT
33841  ATGACACCAA TGGTGCTGTC ATTATTAAAC TTGGCACTGG TCTAAGCTTC GACAACACAG
33901  GCGCCCTAAC TGTGGGAAAC ACTGGTGATG ATAAACTGAC TCTGTGGACG ACCCCAGACC
33961  CATCTCCAAA TTGCAGAATT CACTCAGACA AAGACTGCAA GTTTACTCTA GTCCTAACTA
34021  AGTGTGGAAG CCAAATCCTG GCCTCTGTCG CCGCCCTAGC GGTATCAGGA AATCTGGCTT
34081  CGATAACAGG CACCGTTGCC AGCGTTACCA TCTTTCTCAG ATTTGATCAG AATGGAGTGC
34141  TTATGGAAAA CTCCTCGCTA GACAGGCAGT ACTGGAACTT CAGAAATGGC AACTCAACTA
34201  ACGCTGCCCC CTACACCAAT GCAGTTGGGT TCATGCCAAA CCTCGCAGCA TACCCCAAAA
34261  CGCAAAGCCA GACTGCTAAA AACAACATTG TAAGTCAGGT TTACTTGAAT GGAGACAAAT
34321  CCAAACCCAT GACCCTTACC ATCACCCTCA ATGGAACTAA TGAATCCAGT GAAACTAGCC
34381  AGGTGAGTCA CTACTCCATG TCATTTACAT GGGCTTGGGA AAGTGGGCAA TATGCCACTG
34441  AAACCTTTGC CACCAACTCC TTCACCTTTT CTTACATTGC TGAACAATAA AAAGCATGAC
34501  ACTGATGTTC ATTTCTGATT CTTATTTTAT TATTTTCAAA CACAACAAAA TCATTCAAGT
34561  CATTCTTCCA TCTTAGCTTA ATAGACACAG TAGCTTAATA GACCCAGTAG TGCAAAGCCC
34621  CATTCTAGCT TATAGATCAG ACAGTGATAA TTAACCACCA CCACCACCAT ACCTTTTGAT
34681  TCAGGAAATC ATGATCATCA CAGGATCCTA GTCTTCAGGC CGCCCCCTCC CTCCCAAGAC
34741  ACAGAATACA CAGTCCTCTC CCCCCGACTG GCTTTAAATA ACACCATCTG GTTGGTCACA
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FIG. 5J

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34801  GACATGTTCT TAGGGGTTAT ATTCCACACG GTCTCCTGCC GCGCCAGGCG CTCGTCGGTG
34861  ATGTTGATAA ACTCTCCCGG CAGCTCGCTC AAGTTCACGT CGCTGTCCAG CGGCTGAACC
34921  TCCGGCTGAC GCGATAACTG TGCGACCGGC TGCTGGACAA ACGGAGGCCG CGCCTACAAG
34981  GGGGTAGAGT CATAATCCTC GGTCAGGATA GGGCGGTGAT GCAGCAGCAG CGAGCGAAAC
35041  ATCTGCTGCC GCCGCCGCTC CGTCCGGCAG GAAAACAACA AGCCGGTGGT CTCCTCCGCG
35101  ATAATCCGCA CCGCCCGCAG CATCAGCTTC CTCGTTCTCC GCGCGCAGCA CCTCACCCTG
35161  ATCTCGCTCA AGTCGGCGCA GTAGGTACAG CACAGCACCA CGATGTTATT CATGATCCCA
35221  CAGTGCAGGG CGCTGTATCC AAAGCTCATG CCGGGAACCA CCGCCCCCAC GTGGCCATCG
35281  TACCACAAGC GCACGTAAAT TAAGTGTCGA CCCCTCATGA ACGTGCTGGA CACAAACATT
35341  ACTTCCTTGG GCATGTTGTA ATTCACCACC TCCCGGTACC AGATAAACCT CTGGTTAAAC
35401  AGGGCACCTT CCACCACCAT CCTGAACCAA GAGGCCAGAA CCTGCCCACC GGCTATGCAC
35461  TGCAGGGAAC CCGGGTTGGA ACAATGACAA TGCAGACTCC AAGGCTCGTA ACCGTGGATC
35521  ATCCGGCTGC TGAAGGCATC GATGTTGGCA CAACACAGAC ACACGTGCAT GCACTTTCTC
35581  ATGATTAGCA GCTCTTCCCT CGTCAGGATC ATATCCCAAG GAATAACCCA TTCTTGAATC
35641  AACGTAAAAC CCACACAGCA GGGAAGGCCT CGCACATAAC TCACGTTGTG CATGGTCAGC
35701  GTGTTGCATT CTGGAAACAG CGGATGATCC TCCAGTATCG AGGCGCGGGT CTCCTTCTCA
35761  CAGGGAGGTA AAGGGTCCCT GCTGTACGGA CTGCGCCGGG ACGACCGAGA TCGTGTTGAG
35821  CGTAGTGTCA TGGAAAAGGG AACGCCGGAC GTGGTCATAC TTCTTGAAGC AGAACCAGGT
35881  TCGCGCGTGG CAGGCCTCCT TGCGTCTGCG GTCTCGCCGT CTAGCTCGCT CCGTGTGATA
35941  GTTGTAGTAC AGCCACTCCC GCAGAGCGTC GAGGCGCACC CTGGCTTCCG GATCTATGTA
36001  GACTCCGTCT TGCACCGCGG CCCTGATAAT ATCCACCACC GTAGAATAAG CAACACCCAG
36061  CCAAGCAATA CACTCGCTCT GCGAGCGGCA GACAGGAGGA GCGGGCAGAG ATGGGAGAAC
36121  CATGATAAAA AACTTTTTTT AAAGAATATT TTCCAATTCT TCGAAAGTAA GATCTATCAA
36181  GTGGCAGCGC TCCCCTCCAC TGGCGCGGTC AAACTCTACG GCCAAAGCAC AGACAACGGC
36241  ATTTCTAAGA TGTTCCTTAA TGGCGTCCAA AAGACACACC GCTCTCAAGT TGCAGTAAAC
36301  TATGAATGAA AACCCATCCG GCTGATTTTC CAATATAGAC GCGCCGGCGG CGTCCACCAA
36361  ACCCAGATAA TTTTCTTCTC TCCAGCGGTT TAGAATCTGT CTAAGCAAAT CCCTTATATC
36421  AAGTCCGGCC ATGCCAAAAA TCTGCTCAAG AGCGCCCTCC ACCTTCATGA CCAAGCAGCG
36481  CATCATGATT GCAAAAATTC AGGTTCTTCA GAGACCTGTA TAAGATTCAA AATGGGAACA
36541  TTAACAAAAA TTCCTCTGTC GCGCAGATCC CTTCGCAGGG CAAGCTGAAC ATAATCAGAC
36601  AGGTCTGAAC GGACCAGTGA GGCCAAATCC CCACCAGGAA CCAGATCCAG AGACCCTATA
36661  CTGATTATGA CGCGCATACT CGGGGCTATG CTGACCAGCG TAGCGCCGAT GTAGGCGTGC
36721  TGCATGGGCG GCGAGATAAA ATGCAAAGTG CTGGTTAAAA AATCAGGCAA AGCCTCGCGC
36781  AAAAAAGCTA ACACATCATA ATCATGCTCA TGCAGGTAGT TGCAGGTAAG CTCAGGAACC
36841  AAAACGGAAT AACACACGAT TTTCCTCTCA AACATGACTT CGCGGATACT GCGTAAAACA
36901  AAAATTATAA ATAAAAAATT AATTAACTTA AACATTGGAA GCCTGTCTCA CAACAGGAAA
36961  AACCACTTTA ATCAACATAA GACGGGCCAC GGGCATGCCG GCATAGCCGT AAAAAAATTG
37021  GTCCCCGTGA TTAACAAGTA CCACAGACAG CTCCCCGGTC ATGTCGGGGG TCATCATGTG
37081  AGACTCTGTA TACACGTCTG GATTGTGAAC ATCAGACAAA CAAAGAAATC GAGCCACGTA
37141  GCCCGGAGGT ATAATCACCC GCAGGCGGAG GTACAGCAAA ACGACCCCCA TAGGAGGAAT
37201  CACAAAATTA GTAGGAGAAA AAAATACATA AACACCAGAA AAACCCTGTT GCTGAGGCAA
37261  AATAGCGCCC TCCCGATCCA AAACAACATA AAGCGCTTCC ACAGGAGCAG CCATAACAAA
37321  GACCCGAGTC TTACCAGTAA AAGAAAAAAG ATCTCTCAAC GCAGCACCAG CACCAACACT
37381  TCGCAGTGTA AAAGGCCAAG TGCCGAGAGA GTATATATAG GAATAAAAAG TGACGTAAAC
37441  GGGCAAAGTC CAAAAAACGC CCAGAAAAAC CGCACGCGAA CCTACGCCCC GAAACGAAAG
37501  CCAAAAAACA CTAGACACTC CCTTCCGGCG TCAACTTCCG CTTTCCCACG CTACGTCACT
37561  TGCCCCAGTC AAACAAACTA CATATCCCGA ACTTCCAAGT CGCCACGCCC AAAACACCGC
37621  CTACACCTCC CCGCCCGCCG GCCCGCCCCC AAACCCGCCT CCCGCCCCGC GCCCCGCCTC
37681  GCGCCGCCCA TCTCATTATC ATATTGGCTT CAATCCAAAA TAAGGTATAT TATTGATGAT
37741  G  (SEQ ID NO: 1)
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FIG. 5K

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   1  CATCATCAAT AATATACCTC AAACTTTTGG TGCGCGTTAA TATGCAAATG AGCCGTTTGA
  61  ATTTGGGGAT GCGGGGCGCT GATTGGCTGC GGGAGCGGCG ACCGTTAGGG GCGGGGCGGG
 121  TGACGTTTTG ATGACGTGTT TGTGAGGCGG AGCCGGTTTG CAAGTTCTCG TGGGAAAAGT
 181  GACGTCAAAC GAGGTGTGGT TTGAACACGG AAATACTCAA TTTTCCCGCG CTCTCTGACA
 241  GGAAATGAGG TGTTTCTGGG CGGATGCAAG TGAAAACGGG CCATTTTCGC GCGAAAACTG
 301  AATGAGGAAG TGAAAATCTG AGTAATTTCG CGTTTATGGC AGGGAGGAGT ATTTGCCGAG
 361  GGCCGAGTAG ACTTTGACCG ATTACGTGGG GGTTTCGATT ACCGTATTTT TCACCTAAAT
 421  TTCCGCGTAC GGTGTCAAAG TCCGGTGTTT TTACGTAGGC GTCAGCTGAT CGCCAGGGTA
 481  TTTAAACCTG CGCTCTCTAG TCAAGAGGCC ACTCTTGAGT GCCAGCGAGT AGAGTTTTCT
 541  CCTCCGCGCC GCGAGTCAGA TCTACACTTT GAAAGATGAG GCACCTGAGA GACCTGCCCG
 601  GTAATGTTTT CCTGGCTACT GGGAACGAGA TTCTGGAACT GGTGGTGGAC GCCATGATGG
 661  GTGACGACCC TCCTGAGCCC CCTACCCCAT TTGAGGCGCC TTCGCTGTAC GATTTGTATG
 721  ATCTGGAGGT GGATGTGCCC GAGAACGACC CCAACGAGGA GGCGGTGAAT GATTTGTTTA
 781  GCGATGCCGC GCTGCTGGCC GCCGAGCAGG CTAATACGGA CTCTGGCTCA GACAGCGATT
 841  CCTCTCTCCA TACCCCGAGA CCCGGCAGAG GTGAGAAAAA GATCCCCGAG CTTAAAGGGG
 901  AAGAGCTCGA CCTGCGCTGC TATGAGGAAT GCTTGCCTCC GAGCGATGAT GAGGAGGACG
 961  AGGAGGCGAT TCGAGCTGCA GCGAGCGAGG GAGTGAAAGC TGCGGGCGAG AGCTTTAGCC
1021  TGGACTGTCC TACTCTGCCC GGACACGGCT GTAAGTCTTG TGAATTTCAT CGCATGAATA
1081  CTGGAGATAA GAATGTGATG TGTGCCCTGT GCTATATGAG AGCTTACAAC CATTGTGTTT
1141  ACAGTAAGTG TGATTAACTT TAGCTGGGAA GGCAGAGGGT GACTGGGTGC TGACTGGTTT
1201  ATTTATGTAT ATGTTTTTTA TGTGTAGGTC CCGTCTCTGA CGTAGATGAG ACCCCCACTT
1261  CAGAGTGCAT TTCATCACCC CCAGAAATTG GCGAGGAACC GCCCGAAGAT ATTATTCATA
1321  GACCAGTTGC AGTGAGAGTC ACCGGGCGGA GAGCAGCTGT GGAGAGTTTG GATGACTTGC
1381  TACAGGGTGG GGATGAACCT TTGGACTTGT GTACCCGGAA ACGCCCCAGG CACTAAGTGC
1441  CACACATGTG TGTTTACTTA AGGTGATGTC AGTATTTATA GGGTGTGGAG TGCAATAAAA
1501  TCCGTGTTGA CTTTAAGTGT GTGGTTTATG ACTCAGGGGT GGGGACTGTG GGTATATAAG
1561  CAGGTGCAGA CCTGTGTGGT CAGTTCAGAG CAGGACTCAT GGAGATCTGG ACGGTCTTGG
1621  AAGACTTTCA CCAGACTAGA CAGCTGCTAG AGAACTCATC GGAGGAAGTC TCTTACCTGT
1681  GGAGATTTTG CTTCGGTGGG GCTCTAGCTA AGCTAGTCTA TAGGGCCAAA CAGGATTATA
1741  AGGATCAATT TGAGGATATT TTGAGAGAGT GTCCTAGTAT TTTTGACTCT CTCAACTTGG
1801  GCCATCAGTC TCACTTTAAC CAGAGTATTC TGAGAGCCCT TGACTTTTCT ACTCCTGGCA
1861  GAACTACCGC CGCGGTAGCC TTTTTTGCCT TTATTCTTGA CAAATGGAGT CAAGAAACCC
1921  ATTTCAGCAG GGATTACCGT CTGGACTGCT TAGCAGTAGC TTTGTGGAGA ACATGGAGGT
1981  GCCAGCGCCT GAATGCAATC TCCGGCTACT TGCCAGTACA GCCGGTAGAC ACGCTGAGGA
2041  TCCTGAGTCT CCAGTCACCC CAGGAACACC AACGCCGCCA GCAGCCGCAG CAGGAGCAGC
2101  AGCAAGAGGA GGAGGAGGAG GAGGACCGAG AAGAGAACCC GAGAGCCGGT CTGGACCCTC
2161  CGGTGGCGGA GGAGGAGGAG TAGCTGACTT GTTTCCCGAG CTGCGCCGGG TGCTGACTAG
2221  GTCTTCCAGT GGACGGGAGA GGGGGATTAA GCGGGAGAGG CATGAGGAGA CTAGTCACAG
2281  AACTGAACTG ACTGTCAGTC TGATGAGCCG CAGGCGCCCA GAATCGGTGT GGTGGCATGA
2341  GGTTCAGTCG CAGGGGATAG ATGAGGTCTC GGTAATGCAT GAGAAATATT CCCTAGAACA
2401  AGTCAAGACT TGTTGGTTGG AGCCCGAGGA TGATTGGGAG GTAGCCATCA GGAATTATGC
2461  CAAGCTGGCT CTGAGGCCAG ACAAGAAGTA CAAGATTACC AAACTGATTA ATATCAGAAA
2521  TTCCTGCTAC ATTTCGGGGA ATGGGGCCGA GGTGGAGATC AGTACCCAGG AGAGGGTGGC
2581  CTTCAGATGT TGTATGATGA ATATGTACCC GGGGGTGGTG GGCATGGAGG GAGTCACCTT
2641  TATGAACGCG AGGTTTAGGG GTGATGGGTA TAATGGGGTG GTCTTTATGG CCAACACCAA
2701  GCTGACAGTG CACGGATGCT CCTTCTTTGG CTTCAATAAC ATGTGCATCG AGGCCTGGGG
2761  CAGTGTTTCA GTGAGGGGAT GCAGCTTTTC AGCCAACTGG ATGGGGGTCG TGGGCAGAAC
2821  CAAGAGCGTG GTGTCAGTGA AGAAATGCCT GTTCGAGAGG TGCCACCTGG GGGTGATGAG
2881  CGAGGGCGAA GCCAAAGTCA AACACTGCGC CTCTACCGAG ACGGGCTGCT TTGTGATGAT
2941  CAAGGGCAAT GCCAAAGTCA AGCATAACAT GATTTGTGGG GCCTCGGATG AGCGCGGCTA
3001  CCAGATGCTG ACCTGTGCCG GTGGGAACAG CCATATGCTG GCCACCGTGC ATGTGGCCTC
3061  GCACCCCCGC AAGACATGGC CCGAGTTCGA GCACAACGTC ATGACCCGCT GCAATGTGCA
3121  CCTGGGGTCC CGCCGAGGCA TGTTCATGCC CTACCAGTGC AACATGCAAT TTGTGAAGGT
3181  GCTGCTGGAG CCCGATGCCA TGTCCAGAGT GAGCCTGGTG GGGGTGTTTG ACATGAATGT
3241  GGAGGTGTGG AAAATTCTGA GATATGATGA ATCCAAGACC AGGTGCCGGG CCTGCGAATG
3301  CGGAGGCAAG CACGCCAGGC TTCAGCCCGT GTGTGTGGAG GTGACGGAGG ACCTGCGACC
3361  CGATCATTTG GTGTTGTCCT GCAACGGGAC GGAGTTCGGC TCCAGCGGGG AAGAATCTGA
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FIG. 6A

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3421  CTAGAGTGAG TAGTGTTTGG GGGTGGGTGG GAGTCTGCAT GATGGGCAGA ATGACTAAAA
3481  TCTGTGTTTT TCTGCGCAGC AGCATGAGCG GAAGCGCCTC CTTTGAGGGA GGGGTATTCA
3541  GCCCTTATCT GACGGGGCGT CTCCCCTCCT GGGCGGGAGT GCGTCAGAAT GTGATGGGAT
3601  CCACGGTGGA CGGCCGGCCC GTGCAGCCCG CGAACTCTTC AACCCTGACC TACGCGACCC
3661  TGAGCTCCTC GTCCGTGGAC GCAGCTGCCG CCGCAGCTGC TGCTTCCGCC GCCAGCGCCG
3721  TGCGCGGAAT GGCCTTGGGC GCCGGCTACT ACAGCTCTCT GGTGGCCAAC TCGAGTTCCA
3781  CCAATAATCC CGCCAGCCTG AACGAGGAGA AGCTGCTGCT GCTGATGGCC CAGCTCGAGG
3841  CCCTGACCCA GCGCCTGGGC GAGCTGACCC AGCAGGTGGC TCAGCTGCAG GCGGAGACGC
3901  GGGCCGCGGT TGCCACGGTG AAAACCAAAT AAAAAATGAA TCAATAAATA AACGGAGACG
3961  GTTGTTGATT TTAACACAGA GTCTTGATCT TTATTTGATT TTTCGCGCGC GGTAGGCCCT
4021  GGACCACCGG TCTCGATCAT TGAGCACCCG GTGGATTTTT TCCAGGACCC GGTAGAGGTG
4081  GGCTTGGATG TTGAGGTACA TGGGCATGAG CCCGTCCCGG GGGTGGAGGT AGCTCCATTG
4141  CAGGGCCTCG TGCTCGGGGG TGGTGTTGTA AATCACCCAG TCATAGCAGG GGCGCAGGGC
4201  GTGGTGCTGC ACGATGTCCT TGAGGAGGAG ACTGATGGCC ACGGGCAGCC CCTTGGTGTA
4261  GGTGTTGACG AACCTGTTGA GCTGGGAGGG ATGCATGCGG GGGGAGATGA GATGCATCTT
4321  GGCCTGGATC TTGAGATTGG CGATGTTCCC GCCCAGATCC CGCCGGGGGT TCATGTTGTG
4381  CAGGACCACC AGCACGGTGT ATCCGGTGCA CTTGGGGAAT TTGTCATGCA ACTTGGAAGG
4441  GAAGGCGTGA AAGAATTTGG AGACGCCCTT GTGACCGCCC AGGTTTTCCA TGCACTCATC
4501  CATGATGATG GCGATGGGCC CGTGGGCGGC GGCCTGGGCA AAGACGTTTC GGGGGTCGGA
4561  CACATCGTAG TTGTGGTCCT GGGTGAGCTC GTCATAGGCC ATTTTAATGA ATTTGGGGCG
4621  GAGAGTGCCC GACTGGGGGA CGAAGGTGCC CTCGATCCCG GGGGCGTAGT TCCCCTCGCA
4681  GATCTGCATC TCCCAGGCCT TGAGCTCGGA GGGGGGGATC ATGTCCACCT GCGGGGCGAT
4741  GAAAAAAACG GTTTCCGGGG CGGGGGAGAT GAGCTGGGCC GAAAGCAGGT TCCGGAGCAG
4801  CTGGGACTTG CCGCAGCCGG TGGGACCGTA GATGACCCCG ATGACCGGCT GCAGGTGGTA
4861  GTTGAGGGAG AGACAGCTGC CATCCTCGCG GAGGAGGGGG GCCACCTCGT TCATCATCTC
4921  GCGCACATGC ATGTTCTCGC GCACGAGTTC CGCCAGGAGG CGCTCGCCCC CCAGCGAGAG
4981  GAGCTCTTGC AGCGAGGCGA AGTTTTTCAG CGGCTTGAGC CCGTCGGCCA TGGGCATTTT
5041  GGAGAGGGTC TGTTGCAAGA GTTCCAGACG GTCCCAGAGC TCGGTGATGT GCTCTAGGGC
5101  ATCTCGATCC AGCAGACCTC CTCGTTTCGC GGGTTGGGGC GACTGCGGGA GTAGGGCACC
5161  AGGCGATGGG CGTCCAGCGA GGCCAGGGTC CGGTCCTTCC AGGGTCGCAG GGTCCGCGTC
5221  AGCGTGGTCT CCGTCACGGT GAAGGGGTGC GCGCCGGGCT GGGCGCTTGC GAGGGTGCGC
5281  TTCAGGCTCA TCCGGCTGGT CGAGAACCGC TCCCGGTCGG CGCCCTGCGC GTCGGCCAGG
5341  TAGCAATTGA GCATGAGTTC GTAGTTGAGC GCCTCGGCCG CGTGGCCCTT GGCGCGGAGC
5401  TTACCTTTGG AAGTGTGTCC GCAGACGGGA CAGAGGAGGG ACTTGAGGGC GTAGAGCTTG
5461  GGGGCGAGGA AGACGGACTC GGGGGCGTAG GCGTCCGCGC CGCAGCTGGC GCAGACGGTC
5521  TCGCACTCCA CGAGCCAGGT GAGGTCGGGG CGGTCGGGGT CAAAAACGAG GTTTCCTCCG
5581  TGCTTTTTGA TGCGTTTCTT ACCTCTGGTC TCCATGAGCT CGTGTCCCCG CTGGGTGACA
5641  AAGAGGCTGT CCGTGTCCCC GTAGACCGAC TTTATGGGCC GGTCCTCGAG CGGGGTGCCG
5701  CGGTCCTCGT CGTAGAGGAA CCCCGCCCAC TCCGAGACGA AGGCCCGGGT CCAGGCCAGC
5761  ACGAAGGAGG CCACGTGGGA GGGGTAGCGG TCGTTGTCCA CCAGCGGGTC CACCTTCTCC
5821  AGGGTATGCA AGCACATGTC CCCCTCGTCC ACATCCAGGA AGGTGATTGG CTTGTAAGTG
5881  TAGGCCACGT GACCGGGGGT CCCGGCCGGG GGGGTATAAA AGGGGGCGGG CCCCTGCTCG
5941  TCCTCACTGT CTTCCGGATC GCTGTCCAGG AGCGCCAGCT GTTGGGGTAG GTATTCCCTC
6001  TCGAAGGCGG GCATGACCTC GGCACTCAGG TTGTCAGTTT CTAGAAACGA GGAGGATTTG
6061  ATATTGACGG TGCCGTTGGA GACGCCTTTC ATGAGCCCCT CGTCCATCTG GTCAGAAAAG
6121  ACGATCTTTT TGTTGTCGAG CTTGGTGGCG AAGGAGCCGT AGAGGGCGTT GGAGAGGAGC
6181  TTGGCGATGG AGCGCATGGT CTGGTTCTTT TCCTTGTCGG CGCGCTCCTT GGCGGCGATG
6241  TTGAGCTGCA CGTACTCGCG CGCCACGCAC TTCCATTCGG GGAAGACGGT GGTGAGCTCG
6301  TCGGGCACGA TTCTGACCCG CCAGCCGCGG TTGTGCAGGG TGATGAGGTC CACGCTGGTG
6361  GCCACCTCGC CGCGCAGGGG CTCGTTGGTC CAGCAGAGGC GCCCGCCCTT GCGCGAGCAG
6421  AAGGGGGGCA GCGGGTCCAG CATGAGCTCG TCTGGGGGGT CGGCGTCCAC GGTGAAGATG
6481  CCGGGCAGGA GCTCGGGGTC GAAGTAGCTG ATGGAAGTGG CCAGATCGTC CAGGGAAGCT
6541  TGCCAGTCGC GCACGGCCAG CGCGCGCTCG TAGGGGCTGA GGGGCGTGCC CCAGGGCATG
6601  GGGTGCGTGA GCGCGGAGGC GTACATGCCG CAGATGTCGT AGACGTAGAG GGGCTCCTCG
6661  AGGATGCCGA TGTAGGTGGG GTAGCAGCGC CCCCCGCGGA TGCTGGCGCG CACGTAGTCG
6721  TACAGCTCGT GCGAGGGCGC GAGGAGCCCC GTGCCGAGAT TGGAGCGCTG CGGCTTTTCG
6781  GCGCGGTAGA CGATCTGGCG GAAGATGGCG TGGGAGTTGG AGGAGATGGT GGGCCTCTGG
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FIG. 6B

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 6841  AAGATGTTGA AGTGGGCGTG GGGCAGGCCG ACCGAGTCCC TGATGAAGTG GGCGTAGGAG
 6901  TCCTGCAGCT TGGCGACGAG CTCGGCGGTG ACGAGGACGT CCAGGGCGCA GTAGTCGAGG
 6961  GTCTCTTGGA TGATGTCATA CTTGAGCTGG CCCTTCTGCT TCCACAGCTC GCGGTTGAGA
 7021  AGGAACTCTT CGCGGTCCTT CCAGTACTCT TCGAGGGGGA ACCCGTCCTG ATCGGCACGG
 7081  TAAGAGCCCA CCATGTAGAA CTGGTTGACG GCCTTGTAGG CGCAGCAGCC CTTCTCCACG
 7141  GGGAGGGCGT AAGCTTGCGC GGCCTTGCGC AGGGAGGTGT GGGTGAGGGC GAAGGTGTCG
 7201  CGCACCATGA CCTTGAGGAA CTGGTGCTTG AAGTCGAGGT CGTCGCAGCC GCCCTGCTCC
 7261  CAGAGTTGGA AGTCCGTGCG CTTCTTGTAG GCGGGGTTGG GCAAAGCGAA AGTAACATCG
 7321  TTGAAGAGGA TCTTGCCCGC GCGGGGCATG AAGTTGCGAG TGATGCGGAA AGGCTGGGGC
 7381  ACCTCGGCCC GGTTGTTGAT GACCTGGGCG GCGAGGACGA TCTCGTCGAA GCCGTTGATG
 7441  TTGTGCCCGA CGATGTAGAG TTCCACGAAT CGCGGGCGGC CCTTGACGTG GGGCAGCTTC
 7501  TTGAGCTCGT CGTAGGTGAG CTCGGCGGGG TCGCTGAGCC CGTGCTGTTC GAGGGCCCAG
 7561  TCGGCGACGT GGGGGTTGGC GCTGAGGAAG GAAGTCCAGA GATCCACGGC CAGGGCGGTC
 7621  TGCAAGCGGT CCCGGTACTG ACGGAACTGC TGGCCCACGG CCATTTTTTC GGGGGTGACG
 7681  CAGTAGAAGG TGCGGGGGTC GCCGTGCCAG CGGTCCCACT TGAGCTGGAG GGCGAGGTCG
 7741  TGGGCGAGCT CGACGAGCGG TGGGTCCCCG GAGAGTTTCA TGACCAGCAT GAAGGGGACG
 7801  AGCTGCTTGC CGAAGGACCC CATCCAGGTG TAGGTTTCCA CATCGTAGGT GAGGAAGAGC
 7861  CTTTCGGTGC GAGGATGCGA GCCGATGGGG AAGAACTGGA TCTCCTGCCA CCAGTTGGAG
 7921  GAATGGCTGT TGATGTGATG GAAGTAGAAA TGCCGACGGC GCGCCGAGCA CTCGTGCTTG
 7981  TGTTTATACA AGCGTCCGCA GTGCTCGCAA CGCTGCACGG GATGCACGTG CTGCACGAGC
 8041  TGTACCTGAG TTCCTTTGAC GAGGAATTTC AGTGGGCAGT GGAGCGCTGG CGGCTGCATC
 8101  TGGTGCTGTA CTACGTCCTG GCCATCGGCG TGGCCATCGT CTGCCTCGAT GGTGGTCATG
 8161  CTGACGAGGC CGCGCGGGAG GCAGGTCCAG ACCTCGGCTC GGACGGGTCG GAGAGCGAGG
 8221  ACGAGGGCGC GCAGGCCGGA GCTGTCCAGG GTCCTGAGAC GCTGCGGAGT CAGGTCAGTG
 8281  GGCAGCGGCG GCGCGCGGTT GACTTGCAGG AGCTTTTCCA GGGCGCGCGG GAGGTCCAGA
 8341  TGGTACTTGA TCTCCACGGC GCCGTTGGTG GCGACGTCCA CGGCTTGCAG GGTCCCGTGC
 8401  CCCTGGGGCG CCACCACCGT GCCCCGTTTC TTCTTGGGCG CTGGTTCCAT GCCGGTCAGA
 8461  AGCGGCGGCG AGGACGCGCG CCGGGCGGCA GGGGCGGCTC GGGGCCCGGA GGCAGGGGCG
 8521  GCAGGGGCAC GTCGGCGCCG CGCGCGGGCA GGTTCTGGTA CTGCGCCCGG AGAAGACTGG
 8581  CGTGAGCGAC GACGCGACGG TTGACGTCCT GGATCTGACG CCTCTGGGTG AAGGCCACGG
 8641  GACCCGTGAG TTTGAACCTG AAAGAGAGTT CGACAGAATC AATCTCGGTA TCGTTGACGG
 8701  CGGCCTGCCG CAGGATCTCT TGCACGTCGC CCGAGTTGTC CTGGTAGGCG ATCTCGGTCA
 8761  TGAACTGCTC GATCTCCTCC TCCTGAAGGT CTCCGCGGCC GGCGCGCTCG ACGGTGGCCG
 8821  CGAGGTCGTT GGAGATGCGG CCCATGAGCT GCGAGAAGGC GTTCATGCCG GCCTCGTTCC
 8881  AGACGCGGCT GTAGACCACG GCTCCGTCGG GGTCGCGCGC GCGCATGACC ACCTGGGCGA
 8941  GGTTGAGCTC GACGTGGCGC GTGAAGACCG CGTAGTTGCA GAGGCGCTGG TAGAGGTAGT
 9001  TGAGCGTGGT GGCGATGTGC TCGGTGACGA AGAAGTACAT GATCCAGCGG CGGAGCGGCA
 9061  TCTCGCTGAC GTCGCCCAGG GCTTCCAAGC GCTCCATGGC CTCGTAGAAG TCCACGGCGA
 9121  AGTTGAAAAA CTGGGAGTTG CGCGCCGAGA CGGTCAACTC CTCCTCCAGA AGACGGATGA
 9181  GCTCGGCGAT GGTGGCGCGC ACCTCGCGCT CGAAGGCCCC GGGGGGCTCC TCTTCTTCCA
 9241  TCTCCTCCTC CTCTTCCTCC TCCACTAACA TCTCTTCTAC TTCCTCCTCA GGAGGCGGTG
 9301  GCGGGGGAGG GGCCCTGCGT CGCCGGCGGC GCACGGGCAG ACGGTCGATG AAGCGCTCGA
 9361  TGGTCTCCCC GCGCCGGCGA CGCATGGTCT CGGTGACGGC GCGCCCGTCC TCGCGGGGCC
 9421  GCAGCGTGAA GACGCCGCCG CGCATCTCCA GGTGGCCGCC GGGGGGGTCT CCGTTGGGCA
 9481  GGGAGAGGGC GCTGACGATG CATCTTATCA ATTGGCCCGT AGGGACTCCG CGCAAGGACC
 9541  TGAGCGTCTC GAGATCCACG GGATCCGAAA ACCGCTGAAC GAAGGCTTCG AGCCAGTCGC
 9601  AGTCGCAAGG TAGGCTGAGC CCGGTTTCTT CGGGTATTTG GTCGGGAGGC GGGCGGGCGA
 9661  TGCTGCTGGT GATGAAGTTG AAGTAGGCGG TCCTGAGACG GCGGATGGTG GCGAGGAGCA
 9721  CCAGGTCCTT GGGCCCGGCT TGCTGGATGC GCAGACGGTC GGCCATGCCC CAGGCGTGGT
 9781  CCTGACACCT GGCGAGGTCC TTGTAGTAGT CCTGCATGAG CCGCTCCACG GGCACCTCCT
 9841  CCTCGCCCGC GCGGCCGTGC ATGCGCGTGA GCCCGAACCC GCGCTGCGGC TGGACGAGCG
 9901  CCAGGTCGGC GACGACGCGC TCGGCGAGGA TGGCCTGCTG GATCTGGGTG AGGGTGGTCT
 9961  GGAAGTCGTC GAAGTCGACG AAGCGGTGGT AGGCTCCGGT GTTGATGGTG TATGAGCAGT
10021  TGGCCATGAC GGACCAGTTG ACGGTCTGGT GGCCGGGGCG CACGAGCTCG TGGTACTTGA
10081  GGCGCGAGTA GGCGCGCGTG TCGAAGATGT AGTCGTTGCA GGTGCGCACG AGGTACTGGT
10141  ATCCGACGAG GAAGTGCGGC GGCGGCTGGC GGTAGAGCGG CCATCGCTCG GTGGCGGGGG
10201  CGCCGGGCGC GAGGTCCTCG AGCATGAGGC GGTGGTAGCC GTAGATGTAC CTGGACATCC
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FIG. 6C

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10261  AGGTGATGCC GGCGGCGGTG GTGGAGGCGC GCGGGAACTC GCGGACGCGG TTCCAGATGT
10321  TGCGCAGCGG CAGGAAGTAG TTCATGGTGG CCGCGGTCTG GCCCGTGAGG CGCGCGCAGT
10381  CGTGGATGCT CTATACGGGC AAAAACGAAA GCGGTCAGCG GCTCGACTCC GTGGCCTGGA
10441  GGCTAAGCGA ACGGGTTGGG CTGCGCGTGT ACCCCGGTTC GAATCTCGAA TCAGGCTGGA
10501  GCCGCAGCTA ACGTGGTACT GGCACTCCCG TCTCGACCCA AGCCTGCACA AAACCTCCAG
10561  GATACGGAGG CGGGTCGTTT TGCAACTTTT TGAGGCCGGA AATGAAACTA GTAAGCGCGA
10621  AAAGCGGCCG ACCGCGATGG CTCGCTGCCG TAGTCTGGAG AAGAATCGCC AGGGTTGCGT
10681  TGCGGTGTGC CCCGGTTCGA GGCCGGCCGG ATTCCGCGGC TAACGAGGGC GTGGCTGCCC
10741  CGTCGTTTCC AAGACCCCTA GCCAGCCGAC TTCTCCAGTT ACGGAGCGAG CCCCTCTTTT
10801  GTTTTGTTTG TTTTTGCCAG ATGCATCCCG TACTGCGGCA GATGCGCCCC CACCACCCTC
10861  CACCGCAACA ACAGCCCACT CCACAGCCGG CGCTTCTGCC CCCGCCCCAG CAGCAGCAAC
10921  TTCCAGCCAC GACCGCCGCG GCCGCCGTGA GCGGGGCTGG ACAGACTTCT CAGTATGACC
10981  ACCTGGCCTT GGAAGAGGGC GAGGGGCTGG CGCGCCTGGG GGCGTCGTCG CCGGAGCGGC
11041  ACCCGCGCGT GCAGATGAAA CGGGACGCTC GCGAGGCCTA CGTGCCCAAG CAGAACCTGT
11101  TCAGAGACAG GAGCGGCGAG GAGCCCGAGG AGATGCGCGC GGCCCGGTTC CACGCGGGGC
11161  GGGAGCTGCG GCGCGGCCTG GACCGAAAGA GGGTGCTGAG GGACGAGGAT TTCGAGGCGG
11221  ACGAGCTGAC GGGGATCAGC CCCGCGCGCG CGCACGTGGC CGCGGCCAAC CTGGTCACGG
11281  CGTACGAGCA GACCGTGAAG GAGGAGAGCA ACTTCCAAAA ATCCTTCAAC AACCACGTGC
11341  GCACCCTGAT CGCGCGCGAG GAGGTGACCC TGGGCCTGAT GCACCTGTGG GACCTGCTGG
11401  AGGCCATCGT GCAGAACCCC ACCAGCAAGC CGCTGACGGC GCAGCTGTTC CTGGTGGTGC
11461  AGCACAGTCG GGACAACGAG GCGTTCAGGG AGGCGCTGCT GAATATCACC GAGCCCGAGG
11521  GCCGCTGGCT CCTGGACCTG GTGAACATTC TGCAGAGCAT CGTGGTGCAG GAGCGCGGGC
11581  TGCCGCTGTC CGAGAAGCTG GCGGCCATCA ACTTCTCGGT GCTGAGTCTG GGCAAGTACT
11641  ACGCTAGGAA GATCTACAAG ACCCCGTACG TGCCCATAGA CAAGGAGGTG AAGATCGACG
11701  GGTTTTACAT GCGCATGACC CTGAAAGTGC TGACCCTGAG CGACGATCTG GGGGTGTACC
11761  GCAACGACAG GATGCACCGC GCGGTGAGCG CCAGCCGCCG GCGCGAGCTG AGCGACCAGG
11821  AGCTGATGCA CAGCCTGCAG CGGGCCCTGA CCGGGGCCGG GACCGAGGGG GAGAGCTACT
11881  TTGACATGGG CGCGGACCTG CGCTGGCAGC CCAGCCGCCG GGCCTTGGAA GCTGCCGGCG
11941  GTTCCCCCTA CGTGGAGGAG GTGGACGATG AGGAGGAGGA GGGCGAGTAC CTGGAAGACT
12001  GATGGCGCGA CCGTATTTTT GCTAGATGCA GCAACAGCCA CCGCCGCCTC CTGATCCCGC
12061  GATGCGGGCG GCGCTGCAGA GCCAGCCGTC CGGCATTAAC TCCTCGGACG ATTGGACCCA
12121  GGCCATGCAA CGCATCATGG CGCTGACGAC CCGCAATCCC GAAGCCTTTA GACAGCAGCC
12181  TCAGGCCAAC CGGCTCTCGG CCATCCTGGA GGCCGTGGTG CCCTCGCGCT CGAACCCCAC
12241  GCACGAGAAG GTGCTGGCCA TCGTGAACGC GCTGGTGGAG AACAAGGCCA TCCGCGGCGA
12301  CGAGGCCGGG CTGGTGTACA ACGCGCTGCT GGAGCGCGTG GCCCGCTACA ACAGCACCAA
12361  CGTGCAGACG AACCTGGACC GCATGGTGAC CGACGTGCGC GAGGCGGTGT CGCAGCGCGA
12421  GCGGTTCCAC CGCGAGTCGA ACCTGGGCTC CATGGTGGCG CTGAACGCCT TCCTGAGCAC
12481  GCAGCCCGCC AACGTGCCCC GGGGCCAGGA GGACTACACC AACTTCATCA GCGCGCTGCG
12541  GCTGATGGTG GCCGAGGTGC CCCAGAGCGA GGTGTACCAG TCGGGGCCGG ACTACTTCTT
12601  CCAGACCAGT CGCCAGGGCT TGCAGACCGT GAACCTGAGC CAGGCTTTCA AGAACTTGCA
12661  GGGACTGTGG GGCGTGCAGG CCCCGGTCGG GGACCGCGCG ACGGTGTCGA GCCTGCTGAC
12721  GCCGAACTCG CGCCTGCTGC TGCTGCTGGT GGCGCCCTTC ACGGACAGCG GCAGCGTGAG
12781  CCGCGACTCG TACCTGGGCT ACCTGCTTAA CCTGTACCGC GAGGCCATCG GGCAGGCGCA
12841  CGTGGACGAG CAGACCTACC AGGAGATCAC CCACGTGAGC CGCGCGCTGG GCCAGGAGGA
12901  CCCGGGCAAC CTGGAGGCCA CCCTGAACTT CCTGCTGACC AACCGGTCGC AGAAGATCCC
12961  GCCCCAGTAC GCGCTGAGCA CCGAGGAGGA GCGCATCCTG CGCTACGTGC AGCAGAGCGT
13021  GGGGCTGTTC CTGATGCAGG AGGGGGCCAC GCCCAGCGCC GCGCTCGACA TGACCGCGCG
13081  CAACATGGAG CCCAGCATGT ACGCCCGCAA CCGCCCGTTC ATCAATAAGC TGATGGACTA
13141  CTTGCATCGG GCGGCCGCCA TGAACTCGGA CTACTTTACC AACGCCATCT TGAACCCGCA
13201  CTGGCTCCCG CCGCCCGGGT TCTACACGGG CGAGTATGAC ATGCCCGACC CCAACGACGG
13261  GTTCCTGTGG GATGACGTGG ACAGCAGCGT GTTCTCGCCG CGCCCCGCCA CCACCGTGTG
13321  GAAGAAAGAG GGCGGGGACC GGCGGCCGTC CTCGGCGCTG TCCGGTCGCG CGGGTGCTGC
13381  CGCGGCGGTG CCCGAGGCCG CCAGCCCCTT CCCGAGCCTG CCCTTTTCGC TGAACAGCGT
13441  GCGCAGCAGC GAGCTGGGAC GGCTGACGCG GCCGCGCCTG CTGGGCGAGG AGGAGTACCT
13501  GAACGACTCC TTGTTGAGGC CCGAGCGCGA GAAGAACTTC CCCAATAACG GGATAGAGAG
13561  CCTGGTGGAC AAGATGAGCC GCTGGAAGAC GTACGCGCAC GAGCACAGGG ACGAGCCGCG
13621  AGCTAGCAGC AGCACCGGCG CCCGTAGACG CCAGCGGCAC GACAGGCAGC GGGGACTGGT
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FIG. 6D

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13681  GTGGGACGAT GAGGATTCCG CCGACGACAG CAGCGTGTTG GACTTGGGTG GGAGTGGTGG
13741  TGGTAACCCG TTCGCTCACC TGCGCCCCCG TATCGGGCGC CTGATGTAAG AATCTGAAAA
13801  AATAAAAAAC GGTACTCACC AAGGCCATGG CGACCAGCGT GCGTTCTTCT CTGTTGTTTG
13861  TAGTAGTATG ATGAGGCGCG TGTACCCGGA GGGTCCTCCT CCCTCGTACG AGAGCGTGAT
13921  GCAGCAGGCG GTGGCGGCGG CGATGCAGCC CCCGCTGGAG GCGCCTTACG TGCCCCCGCG
13981  GTACCTGGCG CCTACGGAGG GGCGGAACAG CATTCGTTAC TCGGAGCTGG CACCCTTGTA
14041  CGATACCACC CGGTTGTACC TGGTGGACAA CAAGTCGGCG GACATCGCCT CGCTGAACTA
14101  CCAGAACGAC CACAGCAACT TCCTGACCAC CGTGGTGCAG AACAACGATT TCACCCCCAC
14161  GGAGGCCAGC ACCCAGACCA TCAACTTTGA CGAGCGCTCG CGGTGGGGCG GCCAGCTGAA
14221  AACCATCATG CACACCAACA TGCCCAACGT GAACGAGTTC ATGTACAGCA ACAAGTTCAA
14281  GGCGCGGGTC ATGGTCTCGC GCAAGACCCC CAACGGGGTC GCGGTAGGGG ATGATTATGA
14341  TGGTAGTCAG GACGAGCTGA CCTACGAGTG GGTGGAGTTT GAGCTGCCCG AGGGCAACTT
14401  CTCGGTGACC ATGACCATCG ATCTGATGAA CAACGCCATC ATCGACAATT ACTTGGCGGT
14461  GGGACGGCAG AACGGGGTGC TGGAGAGCGA CATCGGCGTG AAGTTCGACA CGCGCAACTT
14521  CCGGCTGGGC TGGGACCCCG TGACCGAGCT GGTGATGCCG GGCGTGTACA CCAACGAGGC
14581  CTTCCACCCC GACATCGTCC TGCTGCCCGG CTGCGGCGTG GACTTCACCG AGAGCCGCCT
14641  CAGCAACCTG CTGGGCATCC GCAAGCGGCA GCCCTTCCAG GAGGGCTTCC AGATCCTGTA
14701  CGAGGACCTG GAGGGGGGCA ACATCCCCGC GCTCTTGGAT GTCGAAGCCT ATGAAGAAAG
14761  TAAGGAAAAA GCAGAGGCTG AGGCAACTGC AGCCGTGGCT ACTGCCGCTG TCACCGATGC
14821  AGATGCAGCT ACTACCAGGG GCGATACATT CGCCACTGTG GCTGAAGAAG CAGCCGCCGT
14881  AGCGGCGACC GATGATAGTG AAAGTAAGAT AGTCATCAAG CCGGTGGAGA AGGACAGCAA
14941  GAACAGGAGC TACAACGTTC TATCGGATGG AAAGAACACC GCCTACCGCA GCTGGTACCT
15001  GGCCTACAAC TACGGCGACC CCGAGAAGGG CGTGCGCTCC TGGACGCTGC TCACCACCTC
15061  GGACGTCACC TGCGGCGTGG AGCAAGTCTA CTGGTCGCTG CCCGACATGA TGCAAGACCC
15121  GGTCACCTTC CGCTCCACGC GTCAAGTTAG CAACTACCCG GTGGTGGGCG CCGAGCTCCT
15181  GCCCGTCTAC TCCAAGAGCT TCTTCAACGA GCAGGCCGTC TACTCGCAGC AGCTGCGCGC
15241  CTTCACCTCG CTCACGCACG TCTTCAACCG CTTCCCCGAG AACCAGATCC TCGTCCGCCC
15301  GCCCGCGCCC ACCATTACCA CCGTCAGTGA AAACGTTCCT GCTCTCACAG ATCACGGGAC
15361  CCTGCCGCTG CGCAGCAGTA TCCGGGGAGT CCAGCGCGTG ACCGTCACTG ACGCCAGACG
15421  CCGCACCTGC CCCTACGTCT ACAAGGCCCT GGGCGTAGTC GCGCCGCGCG TCCTCTCGAG
15481  CCGCACCTTC TAAAAAATGT CCATTCTCAT CTCGCCCAGT AATAACACCG GTTGGGGCCT
15541  GCGCGCGCCC AGCAAGATGT ACGGAGGCGC TCGCCAACGC TCCACGCAAC ACCCCGTGCG
15601  CGTGCGCGGG CACTTCCGCG CTCCCTGGGG CGCCCTCAAG GGCCGCGTGC GCTCGCGCAC
15661  CACCGTCGAC GACGTGATCG ACCAGGTGGT GGCCGACGCG CGCAACTACA CGCCCGCCGC
15721  CGCGCCCGTC TCCACCGTGG ACGCCGTCAT CGACAGCGTG GTGGCCGACG CGCGCCGGTA
15781  CGCCCGCGCC AAGAGCCGGC GGCGGCGCAT CGCCCGGCGG CACCGGAGCA CCCCCGCCAT
15841  GCGCGCGGCG CGAGCCTTGC TGCGCAGGGC CAGGCGCACG GGACGCAGGG CCATGCTCAG
15901  GGCGGCCAGA CGCGCGGCCT CTGGCAGCAG CAGCGCCGGC AGGACCCGCA GACGCGCGGC
15961  CACGGCGGCG GCGGCGGCCA TCGCCAGCAT GTCCCGCCCG CGGCGCGGCA ACGTGTACTG
16021  GGTGCGCGAC GCCGCCACCG GTGTGCGCGT GCCCGTGCGC ACCCGCCCCC CTCGCACTTG
16081  AAGATGCTGA CTTCGCGATG TTGATGTGTC CCAGCGGCGA GGAGGATGTC CAAGCGCAAA
16141  TTCAAGGAAG AGATGCTCCA GGTCATCGCG CCTGAGATCT ACGGCCCCGC GGCGGCGGTG
16201  AAGGAGGAAA GAAAGCCCCG CAAACTGAAG CGGGTCAAAA AGGACAAAAA GGAGGAGGAA
16261  GATGTGGACG GACTGGTGGA GTTTGTGCGC GAGTTCGCCC CCCGGCGGCG CGTGCAGTGG
16321  CGCGGGCGGA AAGTGAAACC GGTGCTGCGA CCCGGCACCA CCGTGGTCTT CACGCCCGGC
16381  GAGCGTTCCG GCTCCGCCTC CAAGCGCTCC TACGACGAGG TGTACGGGGA CGAGGACATC
16441  CTCGAGCAGG CGGCCGAGCG TCTGGGCGAG TTTGCTTACG GCAAGCGCAG CCGCCCCGCG
16501  CCCTTGAAAG AGGAGGCGGT GTCCATCCCG CTGGACCACG GCAACCCCAC GCCGAGTCTG
16561  AAGCCGGTGA CCCTGCAGCA GGTGCTGCCG AGCGCGGCGC CGCGCCGGGG CTTCAAGCGC
16621  GAGGGCGGCG AGGATCTGTA CCCGACCATG CAGCTGATGG TGCCCAAGCG CCAGAAGCTG
16681  GAGGACGTGC TGGAGCACAT GAAGGTGGAC CCCGAGGTGC AGCCCGAGGT CAAGGTGCGG
16741  CCCATCAAGC AGGTGGCCCC GGGCCTGGGC GTGCAGACCG TGGACATCAA GATCCCCACG
16801  GAGCCCATGG AAACGCAGAC CGAGCCCGTG AAGCCCAGCA CCAGCACCAT GGAGGTGCAG
16861  ACGGATCCCT GGATGCCGGC GCCGGCTTCC ACCACCACCA CTCGCCGAAG ACGCAAGTAC
16921  GGCGCGGCCA GCCTGCTGAT GCCCAACTAC GCGCTGCATC CTTCCATCAT CCCCACGCCG
16981  GGCTACCGCG GCACGCGCTT CTACCGCGGC TACAGCAGCC GCCGCAAGAC CACCACCCGC
17041  CGCCGCCGTC GTCGCACCCG CCGCAGCAGC ACCGCGACTT CCGCCGCCTT GGTGCGGAGA
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FIG. 6E

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17101  GTGTACCGCA GCGGGCGCGA GCCTCTGACC CTGCCGCGCG CGCGCTACCA CCCGAGCATC
17161  GCCATTTAAC TCTGCCGTCG CCTCCTACTT GCAGATATGG CCCTCACATG CCGCCTCCGC
17221  GTCCCCATTA CGGGCTACCG AGGAAGAAAG CCGCGCCGTA GAAGGCTGAC GGGGAACGGG
17281  CTGCGTCGCC ATCACCACCG GCGGCGGCGC GCCATCAGCA AGCGGTTGGG GGGAGGCTTC
17341  CTGCCCGCGC TGATCCCCAT CATCGCCGCG GCGATCGGGG CGATCCCCGG CATAGCTTCC
17401  GTGGCGGTGC AGGCCTCTCA GCGCCACTGA GACACAGCTT GGAAAATTTG TAATAAAAAA
17461  TGGACTGACG CTCCTGGTCC TGTGATGTGT GTTTTTAGAT GGAAGACATC AATTTTTCGT
17521  CCCTGGCACC GCGACACGGC ACGCGGCCGT TTATGGGCAC CTGGAGCGAC ATCGGCAACA
17581  GCCAACTGAA CGGGGGCGCC TTCAATTGGA GCAGTCTCTG GAGCGGGCTT AAGAATTTCG
17641  GGTCCACGCT CAAAACCTAT GGCAACAAGG CGTGGAACAG CAGCACAGGG CAGGCGCTGA
17701  GGGAAAAGCT GAAAGAGCAG AACTTCCAGC AGAAGGTGGT CGATGGCCTG GCCTCGGGCA
17761  TCAACGGGGT GGTGGACCTG GCCAACCAGG CCGTGCAGAA ACAGATCAAC AGCCGCCTGG
17821  ACGCGGTCCC GCCCGCGGGG TCCGTGGAGA TGCCCCAGGT GGAGGAGGAG CTGCCTCCCC
17881  TGGACAAGCG CGGCGACAAG CGACCGCGTC CCGATGCAGA GGAGACGCTG CTGACGCACA
17941  CGGACGAGCC GCCCCCGTAC GAGGAGGCGG TGAAACTGGG TCTGCCCACC ACGCGGCCCG
18001  TGGCGCCTCT GGCCACCGGG GTGCTGAAAC CCAGCAGCAG CAGCCAGCCC GCGACCCTGG
18061  ACTTGCCTCC GCCTGCTTCC CGCCCCTCCA CAGTGGCTAA GCCCCTGCCG CCGGTGGCCG
18121  TCGCGTCGCG CGCCCCCCGA GGCCGCCCCC AGGCGAACTG GCAGAGCACT CTGAACAGCA
18181  TCGTGGGTCT GGGAGTGCAG AGTGTGAAGC GCCGCCGCTG CTATTAAAAG ACACTGTAGC
18241  GCTTAACTTG CTTGTCTGTG TGTATATGTA TGTCCGCCGA CCAGAAGGAA GAGGCGCGTC
18301  GCCGAGTTGC AAGATGGCCA CCCCATCGAT GCTGCCCCAG TGGGCGTACA TGCACATCGC
18361  CGGACAGGAC GCTTCGGAGT ACCTGAGTCC GGGTCTGGTG CAGTTCGCCC GCGCCACAGA
18421  CACCTACTTC AGTCTGGGGA ACAAGTTTAG GAACCCCACG GTGGCGCCCA CGCACGATGT
18481  GACCACCGAC CGCAGCCAGC GGCTGACGCT GCGCTTCGTG CCCGTGGACC GCGAGGACAA
18541  CACCTACTCG TACAAAGTGC GCTACACGCT GGCCGTGGGC GACAACCGCG TGCTGGACAT
18601  GGCCAGCACC TACTTTGACA TCCGCGGCGT GCTGGATCGG GGCCCCAGCT TCAAACCCTA
18661  CTCCGGCACC GCCTACAACA GCCTGGCTCC CAAGGGAGCG CCCAACACCT CACAGTGGAT
18721  AACCAAAGAC AATGGAACTG ATAAGACATA CAGTTTTGGA AATGCTCCAG TCAGAGGATT
18781  GGACATTACA GAAGAGGGTC TCCAAATAGG ACCCGATGAG TCAGGGGGTG AAAGCAAGAA
18841  AATTTTTGCA GACAAAACCT ATCAGCCTGA ACCTCAGCTT GGAGATGAGG AATGGCATGA
18901  TACTATTGGA GCTGAAGACA AGTATGGAGG CAGAGCGCTT AAACCTGCCA CCAACATGAA
18961  ACCCTGCTAT GGGTCTTTCG CCAAGCCAAC TAATGCTAAG GGAGGTCAGG CTAAAAGCAG
19021  AACCAAGGAC GATGGCACTA CTGAGCCTGA TATTGACATG GCCTTCTTTG ACGATCGCAG
19081  TCAGCAAGCT AGTTTCAGTC CAGAACTTGT TTTGTATACT GAGAATGTCG ATCTGGACAC
19141  CCCGGATACC CACATTATTT ACAAACCTGG CACTGATGAA ACAAGTTCTT CTTTCAACTT
19201  GGGTCAGCAG TCCATGCCCA ACAGACCCAA CTACATCGGC TTCAGAGACA ACTTTATCGG
19261  TCTCATGTAC TACAACAGTA CTGGCAATAT GGGTGTACTA GCTGGACAGG CCTCCCAGCT
19321  GAATGCTGTG GTGGACTTGC AGGACAGAAA CACTGAACTG TCCTACCAGC TCTTGCTTGA
19381  CTCTCTGGGT GACAGAACCA GGTATTTCAG TATGTGGAAC CAGGCGGTGG ACAGCTACGA
19441  CCCCGATGTG CGCATTATTG AAAATCACGG TGTGGAGGAT GAACTACCCA ACTATTGCTT
19501  CCCTTTGAAT GGTGTGGGCT TTACAGATAC ATTCCAGGGA ATTAAGGTTA AAACTACCAA
19561  TAACGGAACA GCAAATGCTA CAGAGTGGGA ATCTGATACC TCTGTCAATA ATGCTAATGA
19621  GATTGCCAAG GGCAATCCTT TCGCCATGGA GATCAACATC CAGGCCAACC TGTGGCGGAA
19681  CTTCCTCTAC GCGAACGTGG CGCTGTACCT GCCCGACTCC TACAAGTACA CGCCGGCCAA
19741  CATCACGCTG CCCGCCAACA CCAACACCTA CGATTACATG AACGGCCGCG TGGTAGCGCC
19801  CTCGCTGGTG GACGCCTACA TCAACATCGG GGCGCGCTGG TCGCTGGACC CCATGGACAA
19861  CGTCAACCCC TTCAACCACC ACCGCAACGC GGGCCTGCGC TACCGCTCCA TGCTCCTGGG
19921  CAACGGGCGC TACGTGCCCT TCCACATCCA GGTGCCCCAA AAGTTTTTCG CCATCAAGAG
19981  CCTCCTGCTC CTGCCCGGGT CCTACACCTA CGAGTGGAAC TTCCGCAAGG ACGTCAACAT
20041  GATCCTGCAG AGCTCCCTCG GCAACGACCT GCGCACGGAC GGGGCCTCCA TCGCCTTCAC
20101  CAGCATCAAC CTCTACGCCA CCTTCTTCCC CATGGCGCAC AACACCGCCT CCACGCTCGA
20161  GGCCATGCTG CGCAACGACA CCAACGACCA GTCCTTCAAC GACTACCTCT CGGCGGCCAA
20221  CATGCTCTAC CCCATCCCGG CCAACGCCAC CAACGTGCCC ATCTCCATCC CCTCGCGCAA
20281  CTGGGCCGCC TTCCGCGGCT GGTCCTTCAC GCGCCTCAAG ACCCGCGAGA CGCCCTCGCT
20341  CGGCTCCGGG TTCGACCCCT ACTTCGTCTA CTCGGGCTCC ATCCCCTACC TCGACGGCAC
20401  CTTCTACCTC AACCACACCT TCAAGAAGGT CTCCATCACC TTCGACTCCT CCGTCAGCTG
20461  GCCCGGCAAC GACCGCCTCC TGACGCCCAA CGAGTTCGAA ATCAAGCGCA CCGTCGACGG
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FIG. 6F

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20521  AGAGGGGTAC AACGTGGCCC AGTGCAACAT GACCAAGGAC TGGTTCCTGG TTCAGATGCT
20581  GGCCCACTAC AACATCGGCT ACCAGGGCTT CTACGTGCCC GAGGGCTACA AGGACCGCAT
20641  GTACTCCTTC TTCCGCAACT TCCAGCCCAT GAGCCGCCAG GTCGTGGACG AGGTCAACTA
20701  CAAGGACTAC CAGGCCGTCA CCCTGGCCTA CCAGCACAAC AACTCGGGCT TCGTCGGCTA
20761  CCTCGCGCCC ACCATGCGCC AGGGACAGCC CTACCCCGCC AACTACCCCT ACCCGCTCAT
20821  CGGCAAGAGC GCCGTCGCCA GCGTCACCCA GAAAAAGTTC CTCTGCGACC GGGTCATGTG
20881  GCGCATCCCC TTCTCCAGCA ACTTCATGTC CATGGGCGCG CTCACCGACC TCGGCCAGAA
20941  CATGCTCTAC GCCAACTCCG CCCACGCGCT AGACATGAAT TTCGAAGTCG ACCCCATGGA
21001  TGAGTCCACC CTTCTCTATG TTGTCTTCGA AGTCTTCGAC GTCGTCCGAG TGCACCAGCC
21061  CCACCGCGGC GTCATCGAGG CCGTCTACCT GCGCACGCCC TTCTCGGCCG GTAACGCCAC
21121  CACCTAAGCC CCGCTCTTGC TTCTTGCAAG ATGACGGCCT GTGCGGGCTC CGGCGAGCAG
21181  GAGCTCAGGG CCATCCTCCG CGACCTGGGC TGCGGGCCCT GCTTCCTGGG CACCTTCGAC
21241  AAGCGCTTCC CGGGATTCAT GGCCCCGCAC AAGCTGGCCT GCGCCATCGT CAACACGGCC
21301  GGCCGCGAGA CCGGGGGCGA GCACTGGCTG GCCTTCGCCT GGAACCCGCG CTCCCACACC
21361  TGCTACCTCT TCGACCCCTT CGGGTTCTCG AACGAGCGCC TCAAGCAGAT CTACCAGTTC
21421  GAGTACGAGG GCCTGCTGCG CCGCAGCGCC CTGGCCACCG AGGACCGCTG CGTCACCCTG
21481  GAAAAGTCCA CCCAGACCGT GCAGGGTCCG CGCTCGGCCG CCTGCGGGCT CTTCTGCTGC
21541  ATGTTCCTGC ACGCCTTCGT GCACTGGCCC GACCGCCCCA TGGACAAGAA CCCCACCATG
21601  AACTTGCTGA CGGGGGTGCC CAACGGCATG CTCCAGTCGC CCCAGGTGGA ACCCACCCTG
21661  CGCCGCAACC AGGAAGCGCT CTACCGCTTC CTCAACGCCC ACTCCGCCTA CTTTCGCTCC
21721  CACCGCGCGC GCATCGAGAA GGCCACCGCC TTCGACCGCA TGAATCAAGA CATGTAAACC
21781  GTGTGTGTAT GTGAATGCTT TATTCATAAT AAACAGCACA TGTTTATGCC ACCTTCTCTG
21841  AGGCTCTGAC TTTATTTAGA AATCGAAGGG GTTCTGCCGG CTCTCGGCAT GCCCCGCGGG
21901  CAGGGATACG TTGCGGAACT GGTACTTGGG CAGCCACTTG AACTCGGGGA TCAGCAGCTT
21961  GGGCACGGGG AGGTCGGGGA ACGAGTCGCT CCACAGCTTG CGCGTGAGTT GCAGGGCGCC
22021  CAGCAGGTCG GGCGCGGAGA TCTTGAAATC GCAGTTGGGA CCCGCGTTCT GCGCGCGAGA
22081  GTTGCGGTAC ACGGGGTTGC AGCACTGGAA CACCATCAGG GCCGGGTGCT TCACGCTCGC
22141  CAGCACCGTC GCGTCGGTGA TGCCCTCCAC GTCCAGATCC TCGGCGTTGG CCATCCCGAA
22201  GGGGGTCATC TTGCAGGTCT GCCGCCCCAT GCTGGGCACG CAGCCGGGCT TGTGGTTGCA
22261  ATCGCAGTGC AGGGGGATCA GCATCATCTG GGCCTGCTCG GAGCTCATGC CCGGGTACAT
22321  GGCCTTCATG AAAGCCTCCA GCTGGCGGAA GGCCTGCTGC GCCTTGCCGC CCTCGGTGAA
22381  GAAGACCCCG CAGGACTTGC TAGAGAACTG GTTGGTGGCG CAGCCCGCGT CGTGCACGCA
22441  GCAGCGCGCG TCGTTGTTGG CCAGCTGCAC CACGCTGCGC CCCCAGCGGT TCTGGGTGAT
22501  CTTGGCCCGG TCGGGGTTCT CCTTCAGCGC GCGCTGTCCG TTCTCGCTCG CCACATCCAT
22561  CTCGATCGTG TGCTCCTTCT GGATCATCAC GGTCCCGTGC AGGCACCGCA GCTTGCTCTC
22621  GGCCTCGGTG CACCCGTGCA GCCACAGCGC GCAGCCGGTG CTCTCCCAGT TCTTGTGGGC
22681  GATCTGGGAG TGCGAGTGCA CGAAGCCCTG CAGGAAGCGG CCCATCATCG CGGTCAGGGT
22741  CTTGTTGCTG GTGAAGGTCA GCGGGATGCC GCGGTGCTCC TCGTTCACAT ACAGGTGGCA
22801  GATGCGGCGG TACACCTCGC CCTGCTCGGG CATCAGCTGG AAGGCGGACT TCAGGTCGCT
22861  CTCCACGCGG TACCGGTCCA TCAGCAGCGT CATGACTTCC ATGCCCTTCT CCCAGGCCGA
22921  AACGATCGGC AGGCTCAGGG GGTTCTTCAC CGTTGTCATC TTAGTCGCCG CCGCCGAGGT
22981  CAGGGGGTCG TTCTCGTCCA GGGTCTCAAA CACTCGCTTG CCGTCCTTCT CGATGATGCG
23041  CACGGGGGGG AAGCTGAAGC CCACGGCCGC CAGCTCCTCC TCGGCCTGCC TTTCGTCCTC
23101  GCTGTCCTGG CTGATGTCTT GCAAAGGCAC ATGCTTGGTC TTGCGGGGTT TCTTTTTGGG
23161  CGGCAGAGGC GGCGGCGGAG ACGTGCTGGG CGAGCGCGAG TTCTCGCTCA CCACGACTAT
23221  TTCTTCTTCT TGGCCGTCGT CCGAGACCAC GCGGCGGTAG GCATGCCTCT TCTGGGGCAG
23281  AGGCGGAGGC GACGGGCTCT CGCGGTTCGG CGGGCGGCTG GCAGAGCCCC TTCCGCGTTC
23341  GGGGGTGCGC TCCTGGCGGC GCTGCTCTGA CTGACTTCCT CCGCGGCCGG CCATTGTGTT
23401  CTCCTAGGGA GCAACAACAA GCATGGAGAC TCAGCCATCG TCGCCAACAT CGCCATCTGC
23461  CCCCGCCGCC GACGAGAACC AGCAGAATGA AAGCTTAACC GCCCCGCCGC CCAGCCCCAC
23521  CTCCGACGCC GCGGCCCCAG ACATGCAAGA GATGGAGGAA TCCATCGAGA TTGACCTGGG
23581  CTACGTGACG CCCGCGGAGC ACGAGGAGGA GCTGGCAGCG CGCTTTTCAG CCCCGGAAGA
23641  GAACCACCAA GAGCAGCCAG AGCAGGAAGC AGAGAGCGAG CAGAACCAGG CTGGGCTCGA
23701  GCATGGCGAC TACCTGAGCG GGGCAGAGGA CGTGCTCATC AAGCATCTGA CCCGCCAATG
23761  CATCATCGTC AAGGACGCGC TGCTCGACCG CGCCGAGGTG CCCCTCAGCG TGGCGGAGCT
23821  CAGCCGCGCC TACGAGCGCA ACCTCTTCTC GCCGCGCGTG CCCCCCAAGC GCCAGCCCAA
23881  CGGCACCTGC GAGCCCAACC CGCGCCTCAA CTTCTACCCG GTCTTCGCGG TGCCCGAGGC
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FIG. 6G

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23941  CCTGGCCACC TACCACCTCT TTTTCAAGAA CCAAAGGATC CCCGTCTCCT GCCGCGCCAA
24001  CCGCACCCGC GCCGACGCCC TGCTCAACCT GGGCCCCGGC GCCCGCCTAC CTGATATCAC
24061  CTCCTTGGAA GAGGTTCCCA AGATCTTCGA GGGTCTGGGC AGCGACGAGA CTCGGGCCGC
24121  GAACGCTCTG CAAGGAAGCG GAGAGGAACA TGAGCACCAC AGCGCCCTGG TGGAGTTGGA
24181  AGGCGACAAC GCGCGCCTGG CGGTGCTCAA GCGCACGGTC GAGCTGACCC ACTTCGCCTA
24241  CCCGGCGCTC AACCTGCCCC CCAAGGTCAT GAGCGCCGTC ATGGACCAGG TGCTCATCAA
24301  GCGCGCCTCG CCCATTGAGG ACATGCAGGA CCCCGAGAGC TCGGACGAGG GCAAGCCCGT
24361  GGTCAGCGAC GAGCAGCTGG CGCGCTGGCT GGGAGCGAGT AGCACCCCCC AGAGCCTGGA
24421  AGAGCGGCGC AAGCTCATGA TGGCCGTGGT CCTGGTGACC GTGGAGCTGG AGTGTCTGCG
24481  CCGCTTCTTC GCCGACGCAG AGACCCTGCG CAAGGTCGAG GAGAACCTGC ACTACCTCTT
24541  CAGGCACGGG TTCGTGCGCC AGGCCTGCAA GATCTCCAAC GTGGAGCTGA CCAACCTGGT
24601  CTCCTACATG GGCATCCTGC ACGAGAACCG CCTGGGGCAG AACGTGCTGC ACACCACCCT
24661  GCGCGGGGAG GCCCGCCGCG ACTACATCCG CGACTGCGTC TACCTGTACC TCTGCCACAC
24721  CTGGCAGACG GGCATGGGCG TGTGGCAGCA GTGCCTGGAG GAGCAGAACC TGAAAGAGCT
24781  CTGCAAGCTC CTGCAGAAGA ACCTCAAGGC CCTGTGGACC GGGTTCGACG AGCGCACCAC
24841  CGCCTCGGAC CTGGCCGACC TCATCTTCCC CGAGCGCCTG CGGCTGACGC TGCGCAACGG
24901  GCTGCCCGAC TTTATGAGCC AAAGCATGTT GCAAAACTTT CGCTCTTTCA TCCTCGAACG
24961  CTCCGGGATC CTGCCCGCCA CCTGCTCCGC GCTGCCCTCG GACTTCGTGC CGCTGACCTT
25021  CCGCGAGTGC CCCCCGCCGC TCTGGAGCCA CTGCTACTTG CTGCGCCTGG CCAACTACCT
25081  GGCCTACCAC TCGGACGTGA TCGAGGACGT CAGCGGCGAG GGTCTGCTGG AGTGCCACTG
25141  CCGCTGCAAC CTCTGCACGC CGCACCGCTC CCTGGCCTGC AACCCCCAGC TGCTGAGCGA
25201  GACCCAGATC ATCGGCACCT TCGAGTTGCA AGGCCCCGGC GAGGAGGGCA AGGGGGGTCT
25261  GAAACTCACC CCGGGGCTGT GGACCTCGGC CTACTTGCGC AAGTTCGTGC CCGAGGACTA
25321  CCATCCCTTC GAGATCAGGT TCTACGAGGA CCAATCCCAG CCGCCCAAGG CCGAGCTGTC
25381  GGCCTGCGTC ATCACCCAGG GGGCCATCCT GGCCCAATTG CAAGCCATCC AGAAATCCCG
25441  CCAAGAATTT CTGCTGAAAA AGGGCCACGG GGTCTACTTG GACCCCCAGA CCGGAGAGGA
25501  GCTCAACCCC AGCTTCCCCC AGGATGCCCC GAGGAAGCAG CAAGAAGCTG AAAGTGGAGC
25561  TGCCGCCGCC GGAGGATTTG GAGGAAGACT GGGAGAGCAG TCAGGCAGAG GAGGAGATGG
25621  AAGACTGGGA CAGCACTCAG GCAGAGGAGG ACAGCCTGCA AGACAGTCTG GAGGAGGAAG
25681  ACGAGGTGGA GGAGGAGGAG GCAGAGGAAG AAGCAGCCGC CGCCAGACCG TCGTCCTCGG
25741  CGGAGAAAGC AAGCAGCACG GATACCATCT CCGCTCCGGG TCGGGGTCGC GGCGGCCGGG
25801  CCCACAGTAG GTGGGACGAG ACCGGGCGCT TCCCGAACCC CACCACCCAG ACCGGTAAGA
25861  AGGAGCGGCA GGGATACAAG TCCTGGCGGG GGCACAAAAA CGCCATCGTC TCCTGCTTGC
25921  AAGCCTGCGG GGGCAACATC TCCTTCACCC GGCGCTACCT GCTCTTCCAC CGCGGGGTGA
25981  ACTTCCCCCG CAACATCTTG CATTACTACC GTCACCTCCA CAGCCCCTAC TACTGTTTCC
26041  AAGAAGAGGC AGAAACCCAG CAGCAGCAGA AAACCAGCGA CAGCGGCAGC AGCTAGAAAA
26101  TCCACAGCGG CAGGTGGACT GAGGATCGCG GCGAACGAGC CGGCGCAGAC CCGGGAGCTG
26161  AGGAACCGGA TCTTTCCCAC CCTCTATGCC ATCTTCCAGC AGAGTCGGGG GCAGGAGCAG
26221  GAACTGAAAG TCAAGAACCG TTCTCTGCGC TCGCTCACCC GCAGTTGTCT GTATCACAAG
26281  AGCGAAGACC AACTTCAGCG CACTCTCGAG GACGCCGAGG CTCTCTTCAA CAAGTACTGC
26341  GCGCTCACTC TTAAAGAGTA GCCCGCGCCC GCCCACACAC GGAAAAAGGC GGGAATTACG
26401  TCACCACCTG CGCCCTTCGC CCGACCATCA TCATGAGCAA AGAGATTCCC ACGCCTTACA
26461  TGTGGAGCTA CCAGCCCCAG ATGGGTCTGG CCGCCGGCGC CGCCCAGGAC TACTCCACCC
26521  GCATGAACTG GCTCAGTGCC GGGCCCGCGA TGATCTCACG GGTGAATGAC ATCCGCGCCC
26581  ATCGAAACCA GATACTCCTA GAACAGTCAG CGATCACCGC CACGCCCCGC CATCACCTTA
26641  ATCCGCGTAA TTGGCCCGCC GCCCTGGTGT ACCAGGAAAT TCCCCAGCCC ACGACCGTAC
26701  TACTTCCGCG AGACGCCCAG GCCGAAGTCC AGCTGACTAA CTCAGGTGTC CAGCTGGCCG
26761  GCGGCGCCGC CCTGTGTCGT CACCGCCCCG CTCAGGGTAT AAAGCGGCTG GTGATCCGAG
26821  GCAGAGGCAC ACAGCTCAAC GACGAGGTGG TGAGCTCTTC GCTGGGTCTG CGACCTGACG
26881  GAGTCTTCCA ACTCGCCGGA TCGGGGAGAT CTTCCTTCAC GCCTCGTCAG GCCGTCCTGA
26941  CTTTGGAGAG TTCGTCCTCG CAGCCCCGCT CGGGCGGCAT CGGCACTCTC CAGTTCGTGG
27001  AGGAGTTCAC TCCCTCGGTC TACTTCAACC CCTTCTCCGG CTCCCCCGGC CACTACCCGG
27061  ACGAGTTCAT CCCGAACTTC GACGCCATCA GCGAGTCGGT GGACGGCTAC GATTGAATGT
27121  CCCATGGTGG CGCAGCTGAC CTAGCTCGGC TTCGACACCT GGACCACTGC CGCCGCTTCC
27181  GCTGCTTCGC TCGGGATCTC GCCGAGTTTG CCTACTTTGA GCTGCCCGAG GAGCACCCTC
27241  AGGGCCCGGC CCACGGAGTG CGGATCATCA TCGAAGGGGG CCTCGACTCC CACCTGCTTC
27301  GGATCTTCAG CCAGCGACCG ATCCTGGTCG AGCGCGAGCA AGGACAGACC CGTCTGACCC
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FIG. 6H

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27361 TGTACTGCAT CTGCAACCAC CCCGGCCTGC ATGAAAGTCT TTGTTGTCTG CTGTGTACTG
27421 AGTATAATAA AAGCTGAGAT CAGCGACTAC TCCGGACTCG ATTGTGGTGT TCCTGCTATC
27481 AACCGGTCCC TGTTCTTCAC CGGGAACGAG ACCGAGCTCC AGCTCCAGTG TAAGCCCCAC
27541 AAGAAGTACC TCACCTGGCT GTTCCAGGGC TCTCCGATCG CCGTTGTCAA CCACTGCGAC
27601 AACGACGGAG TCCTGCTGAG CGGCCCTGCC AACCTTACTT TTTCCACCCG CAGAAGCAAG
27661 CTCCAGCTCT TCCAACCCTT CCTCCCCGGG ACCTATCAGT GCGTCTCGGG ACCCTGCCAT
27721 CACACCTTCC ACCTGATCCC GAATACCACA GCGCCGCTCC CCGCTACTAA CAACCAAACT
27781 ACCCACCAAC GCCACCGTCG CGACCTTTCC TCTGAATCTA ATACTACCAC CCACACCGGA
27841 GGTGAGCTCC GAGGTCGACC AACCTCTGGG ATTTACTACG GCCCCTGGGA GGTGGTGGGG
27901 TTAATAGCGC TAGGCCTAGT TGTGGGTGGG CTTTTGGCTC TCTGCTACCT ATACCTCCCT
27961 TGCTGTTCGT ACTTAGTGGT GCTGTGTTGC TGGTTTAAGA AATGGGGAAG ATCACCCTAG
28021 TGAGCTGCGG TGTGCTGGTG GCGGTGTTGC TTTCGATTGT GGGACTGGGC GGCGCGGCTG
28081 TAGTGAAGGA GGAGAAGGCC GATCCCTGCT TGCATTTCAA TCCCGACAAA TGCCAGCTGA
28141 GTTTTCAGCC CGATGGCAAT CGGTGCACGG TGCTGATCAA GTGCGGATGG GAATGTGAGA
28201 ACGTGAGAAT CGAGTACAAT AACAAGACTC GGAACAATAC TCTCGCGTCC GTGTGGCAAC
28261 CCGGGGACCC CGAGTGGTAC ACCGTCTCTG TCCCCGGTGC TGACGGCTCC CCGCGCACCG
28321 TGAATAATAC TTTCATTTTT GCGCACATGT GCGACACGGT CATGTGGATG AGCAAGCAGT
28381 ACGATATGTG GCCCCCCACG AAGGAGAACA TCGTGGTCTT CTCCATCGCT TACAGCGTGT
28441 GCACGGCGCT AATCACCGCT ATCGTGTGCC TGAGCATTCA CATGCTCATC GCTATTCGCC
28501 CCAGAAATAA TGCCGAAAAA GAGAAACAGC CATAACACGT TTTTTCACAC ACCTTTTTCA
28561 GACCATGGCC TCTGTTACTG CCCTAATTAT TTTTTTGGGT CTCGTGGGCA CTAGCAGCAC
28621 TTTTCAGCAT ATAAACAAAA CTGTTTATGC TGGTTCTAAT TCTGTATTAC CTGGGCATCA
28681 ATCACACCAG AAAGTTTCAT GGTACTGGTA TGATAAAAAT AACACGCCAG TCACACTCTG
28741 CAAGGGTCAT CAAACACCCA TAAACCGTAG TGGAATTTTT TTTAAATGTA ATCATAATAA
28801 TATTACACTA CTTTCAATTA CAAAGCACTA TTCTGGTACT TACTATGGAA CCAATTTTAA
28861 CATAAAAACAG GACACTTACT ATAGTGTCAC AGTATTGGAT CCAACTACTC CTAGAACAAC
28921 TACAAAACCC ACAACTACTA AGAGGCACAC TAAACCTAAA ACTACCAAGA AAACCACTGT
28981 CAAAACAACA ACTAGGACCA CCACAACTAC AGAGGCTACC ACCAGCACAA CACTTGCTGC
29041 AACTACACAC ACACACACTG AGCTAACCTT ACAGACCACT AATGATTTGA TAGCCCTGTT
29101 GCAAAAGGGG GATAACAGCA CCACTTCCGA TGAGGAAATA CCCAAATCCA TGATTGGCAT
29161 TATTGTTGCT GTAGTGGTGT GCATGTTGAT CATCGCCTTG TGCATGGTGT ACTATGCCTT
29221 CTGCTACAGA AAGCACAGAC TGAACGACAA GCTGGAACAC TTACTAAGTG TTGAATTTTA
29281 ATTTTTTAGA ACCATGAAGA TCCTAGGCCT TTTAGTTTTT TCTATCATTA CCTCTGCTCT
29341 TTGTGAATCA GTGAATAAAG ATGTTACTAT TACCACTGGT TCTAATTATA CACTGAAAGG
29401 GCCACCCTCA GGTATGCTTT CGTGGTATTG CTATTTTGGA ACTGACACTG ATCAAACTGA
29461 ATTATGCAAT TTTCAAAAAG GCAAAACCTC AAACTCTAAA ATCTCTAATT ATCAATGCAA
29521 TGGCACTGAT CTGATACTAC TCAATGTCAC GAAAGCATAT GGTGGCAGTT ATTCTTGCCC
29581 TGGACAAAAC ACTGAAGAAA TGATTTTTTA CAAAGTGGAA GTGGTTGATC CCACTACTCC
29641 ACCCACCACC ACAACTACTC ACACCACACA CACAGAACAA ACCACAGCAG AGGAGGCAGC
29701 AAAGTTAGCC TTGCAGGTCC AAGACAGTTC ATTTGTTGGC ATTACCCCTA CACCTGATCA
29761 GCGGTGTCCG GGGCTGCTAG TCAGCGGCAT TGTCGGTGTG CTTTCGGGAT TAGCAGTCAT
29821 AATCATCTGC ATGTTCATTT TTGCTTGCTG CTATAGAAGG CTTTACCGAC AAAAATCAGA
29881 CCCACTGCTG AACCTCTATG TTTAATTTTT TCCAGAGCCA TGAAGGCAGT TAGCACTCTA
29941 GTTTTTTGTT CTTTGATTGG CATTGTTTTT AGTGCTGGGT TTTTGAAAAA TCTTACCATT
30001 TATGAAGGTG AGAATGCCAC TCTAGTGGGC ATCAGTGGTC AAAATGTCAG CTGGCTAAAA
30061 TACCATCTAG ATGGGTGGAA AGACATTTGC GATTGGAATG TCACTGTGTA TACATGTAAT
30121 GGAGTTAACC TCACCATTAC TAATGCCACC CAAGATCAGA ATGGTAGGTT TAAGGGTCAG
30181 AGTTTCACTA GAAATAATGG GTATGAATCC CATAACATGT TTATCTATGA CGTCACTGTC
30241 ATCAGAAATG AGACCGCCAC CACCACACAG ATGCCCACTA CACACAGTTC TACCACTACT
30301 ACCAAGCAAA CCACACAGAC AACCACTTTT TATACATCAA CTCAGCATAT GACCACCACT
30361 ACAGCAGCAA AGCCAAGTAG CGCAGCGCCT CAGCCACAGG CTTTGGCTTT GAAAGCTGCA
30421 CAACCTAGTA CAACTACTAA GACCAATGAG CAGACTACTG ATTTTTTGTC CACTGTCGAG
30481 AGCCACACCA CAGCTACCTC CAGTGCCTTC TCTAGCACCG CCAATCTCTC CTCGCTTTCC
30541 TCTACACCAA TCAGTCCCGC TACTACTCCT AGCCCCGCTC CTCTTCCCAC TCCCCTGAAG
30601 CAAACAGACG GCGGCATGCA ATGGCAGATC ACCCTGCTCA TTGTGATCGG GTTGGTCATC
30661 CTGGCCGTGT TGCTCTACTA CATCTTCTGC CGCCGCATTC CCAACGCGCA CCGCAAGCCG
30721 GTCTACAAGC CCATCGTTGT CGGGCAGCCG GAGCCGCTTC AGGTGGAAGG GGGTCTAAGG
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FIG. 6I

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30781  AATCTTCTCT TCTCTTTTAC AGTATGGTGA TTGAACTATG ATTCCTAGAC AATTCTTGAT
30841  CACTATTCTT ATCTGCCTCC TCCAAGTCTG TGCCACCCTC GCTCTGGTGG CCAACGCCAG
30901  TCCAGACTGT ATTGGGCCCT TCGCCTCCTA CGTGCTCTTT GCCTTCATCA CCTGCATCTG
30961  CTGTTGTAGC ATAGTCTGCC TGCTTATCAC CTTCTTCCAG TTCATTGACT GGATCTTTGT
31021  GCGCATCGCC TACCTGCGCC ACCACCCCCA GTACCGCGAC CAGCGAGTGG CGCGACTGCT
31081  CAGGCTCCTC TGATAAGCAT GCGGGCTCTG CTACTTCTCG CGCTTCTGCT GTTAGTGCTC
31141  CCCCGTCCCG TCGACCCCCG GTCCCCCGAG GAGGTCCGCA AATGCAAATT CCAAGAACCC
31201  TGGAAATTCC TCAAATGCTA CCGCCAAAAA TCAGACATGC ATCCCAGCTG GATCATGATC
31261  ATTGGGATCG TGAACATTCT GGCCTGCACC CTCATCTCCT TTGTGATTTA CCCCTGCTTT
31321  GACTTTGGTT GGAACTCGCC AGAGGCACTC TATCTCCCGC CTGAGCCTGA CACACCACCA
31381  CAGCAGCAAC CTCAGGCACA CGCACTACCA CCACCACAGC CTAGGCCACA ATACATGCCC
31441  ATATTAGACT ATGAGGCCGA GCCACAGCGA CCCATGCTCC CCGCTATTAG TTACTTCAAT
31501  CTAACCGGCG GAGATGACTG ACCCACTGGC CAACAACAAC GTCAACGACC TTCTCCTGGA
31561  CATGGACGGC CGCGCCTCGG AGCAGCGACT CGCCCAACTC CGCATCCGCC AGCAGCAGGA
31621  GAGAGCCGTC AAGGAGCTGC AGGATGCGGT GGCCATCCAC CAGTGCAAGA AAGGCATCTT
31681  CTGCCTGGTG AAGCAGGCCA AGATCTCCTA CGAGGTCACC CAGACCGACC ATCGCCTCTC
31741  CTACGAGCTC CTGCAGCAGC GCCAGAAGTT CACCTGCCTG GTCGGAGTCA ACCCCATCGT
31801  CATCACCCAG CAGTCGGGCG ATACCAAGGG GTGCATCCAC TGCTCCTGCG ACTCCCCCGA
31861  GTGCGTTCAC ACCATGATCA AGACCCTCTG CGGCCTCCGC GACCTCCTCC CCATGAACTA
31921  ATCACCCCCT TATCCAGTGA AATAAAGATC ATATTGATGA TGATTTAAAT AAAAAAATAA
31981  TCATTTGATT TGAAATAAAG ATACAATCAT ATTGATGATT TGAGTTTAAC AAAAATAAAG
32041  AATCACTTAC TTGAAATCTG ATACCAGGTC TCTGTCCATG TTTTCTGCCA ACACCACCTC
32101  ACTCCCCTCT TCCCAGCTCT GGTACTGCAG GCCCCGGCGG GCTGCAAACT TCCTCCACAC
32161  GCTGAAGGGG ATGTCAAATT CCTCCTGTCC CTCAATCTTC ATTTTCTCTT CTATCAGATG
32221  TCCAAAAAGC GCGCGCGGGT GGATGATGAC TTCGACCCCG TGTACCCCTA CGATGCAGAC
32281  AACGCACCGA CTGTGCCCTT CATCAACCCT CCCTTCGTCT CTTCAGATGG ATTCCAAGAA
32341  AAGCCCCTGG GGGTGTTGTC CCTGCGACTG GCCGATCCCG TCACCACCAA GAACGGGGCT
32401  GTCACCCTCA AGCTGGGGGA GGGGGTGGAC CTCGACGACT CGGGAAAACT CATCTCCAAA
32461  AATGCCACCA AGGCCACTGC CCCTCTCAGT ATTTCCAACA ACACCATTTC CCTTAACATG
32521  GATACCCCTC TTTACAACAA CAATGGAAAG CTAGGTATGA AGGTAACCGC ACCATTAAAG
32581  ATATTAGACA CAGATCTACT AAAAACACTT GTTGTTGCTT ATGGGCAGGG ATTAGGAACA
32641  AACACCAATG GTGCTCTTGT TGCCCAACTA GCATACCCAC TTGTTTTTAA TACCGCTAGC
32701  AAAATTGCCC TTAATTTAGG CAATGGACCA TTAAAAGTGG ATGCAAATAG ACTGAACATT
32761  AATTGCAAAA GAGGTATCTA TGTCACTACC ACAAAAGATG CACTGGAGAT TAATATCAGT
32821  TGGGCAAATG CTATGACATT TATAGGAAAT GCCATTGGTG TCAATATTGA CACAAAAAAA
32881  GGCCTACAGT TCGGCACTTC AAGCACTGAA ACAGATGTTA AAAATGCTTT TCCACTCCAA
32941  GTAAAACTTG GAGCTGGTCT TACATTTGAC AGCACAGGTG CCATTGTTGC TTGGAACAAA
33001  GAAGATGACA AACTTACACT GTGGACCACA GCCGATCCAT CTCCAAACTG TCACATATAT
33061  TCTGCAAAGG ATGCTAAGCT TACACTCTGC TTGACAAAGT GTGGTAGTCA GATACTGGGC
33121  ACTGTTTCTC TCATAGCTGT TGATACTGGT AGCTTAAATC CAATAACAGG AAAAGTAACC
33181  ACTGCTCTTG TTTCACTTAA ATTCGATGCC AATGGAGTTT TGCAAGCCAG TTCAACACTA
33241  GATAAAGAAT ATTGGAATTT CAGAAAAGGA GATGTGACAC CTGCTGACCC CTACACTAAT
33301  GCTATAGGCT TTATGCCCAA CCTTAATGCA TACCCAAAAA ACACAAACGC AGCTGCAAAA
33361  AGTCACATTG TTGGAAAAGT ATACCTACAT GGGGATGAAA GCAAGCCACT AGACTTGATA
33421  ATTACATTTA ATGAAACCAG TGATGAATCC TGTACTTATT GCATTAACTT TCAGTGGCAG
33481  TGGGGAACTG ACCAATATAA AGATGAAACA CTTGCAGTCA GTTCATTCAC CTTCTCATAC
33541  ATTGCTAAAG AATAACATCC ACCCTGCATG CCAACCCATT TCCCTCTATC TATACATGGA
33601  AAACTCTGAA GCAGAAAAAA TAAAGTTCAA GTGTTTTATT GATTCAACAG TTTTTACAGA
33661  ATTCGAGTAG TTATTTTCCC TCCACCCTCC CAACTCATGG AATACACCAT CCTCTCCCCA
33721  CGCACAGCCT TAAACATCTG AATGCCATTG GTAATGGACA TGGTTTTGGC CTCCACATTC
33781  CACACAGTTT CAGAGCGAGC CAGTCTCGGG TCGGTCAGGG AGATGAAACC CTCCGGGCAC
33841  TCCTGCATCT GCACCTCACA GTTCAACAGC TGAGGGCTGT CCTCGGTGGT CGGGATCACA
33901  GTTATCTGGA AGAAGAGCGA TGAGAGTCAT AATCCGCGAA CGGGATCGGG CGGTTGTGGC
33961  GCATCAGGCC CCGCAGCAGT CGCTGTCTGC GCCGCTCCGT CAAGCTGCTG CTCAAGGGGT
34021  CCGGGTCCAG GGACTCCCCG CGCATGATGC CGATGGCCCT GAGCATCAGT CGCCTGGTGC
34081  GGCGGGCGCA GCAGCGGATG CGGATCTCAC TCAGGTCGGA ACAGTACGTG CAGCACAGCA
34141  CTACCAAGTT GTTCAACAGT CCATAGTTCA ACGTGCTCCA GCCAAAACTC ATCTGTGGAA
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FIG. 6J

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342 01  CTATGCTGCC CACATGTCCA TCGTACCAGA TCCTGATGTA AATCAGGTGG CGCCCCCTCC
342 61  AGAACACACT GCCCATGTAC ATGATCTCCT TGGGCATGTG CAGGTTCACC ACCTCCCGGT
343 21  ACCACATCAC CCGCTGGTTG AACATGCAGC CCCGGATGAT CCTGCGGAAC CACAGGGCCA
343 81  GCACCGCCCC GCCCGCCATG CAGCGCAGGG ACCCCGGGTC CTGGCAATGG CAGTGGATGA
344 41  TCCACCGCTC GTACCCGTGG ATCATCTGGG AGCTGAACAA GTCTATGTTG GCACAGCACA
345 01  GGCACACGCT CATGCATCTC TTCAGCACTC TCAGCTCCTC GGGGGTCAAA ACCATATCCC
345 61  AGGGTACGGG GAACTCTTGC AGGACAGCGA ACCCCGCAGA ACAGGGCAAA CCTCGCACAG
346 21  AACTTACATT GTGCATGGAC AGGGTATCGC AATCAGGCAG CACCGGGTGA TCCTCCACCA
346 81  GGGAAGCGCG GGTCTCGATT TCCTCACAGC GTGGTAAGGG GGCCGGTCGA TACGGGTGAT
347 41  GGCGGGACGC GGCTGATCGT GTTCGCGATC GTGTCATGAT GCAGTTGCTT TCGGACATTT
348 01  TCGTACTTGC TATAGCAGAA CCTGGTCCGG GCGCTGCACA CCGATCGCCG GCGGCGGTCT
348 61  CGGCGCTTGG AACGCTCCGT GTTGAAATTG TAAAACAGCC ACTCTCTCAG ACCGTGCAGC
349 21  AGATCTAGGG CCTCAGGAGT GATGAAGATC CCATCATGCC TGATGGCTCT GATCACATCG
349 81  ACCACCGTGG AATGGGCCAG ACCCAGCCAG ATGATGCAAT TTTGTTGGGT TTCGGTGACG
350 41  GCGGGGGAGG GAAGAACAGG AAGAACCATG ATTAACTTTA ATCCAAACGG TCTCGGAGCA
351 01  CTTCAAAATG AAGGTCGCGG AGATGGCACC TCTCGCCCCC GCTGTGTTGG TGGAAAATAA
351 61  CAGCCAGGTC AAAGGTGATA CGGTTCTCGA GATGTTCCAC GGTGGCTTCC AGCAAAGCCT
352 21  CCACGCGCAC ATCCAGAAAC AAGACAATAG CGAAAGCGGG AGGGTTCTCT AATTCCTCAA
352 81  TCATCATGTT ACACTCCTGC ACCATCCCCA GATAATTTTC ATTTTTCCAG CCTTGAATGA
353 41  TTCGAACTAG TTCCTGAGGT AAATCCAAGC CAGCCATGAT AAAGAGCTCG CGCAGAGCGC
354 01  CCTCCACCGG CATTCTTAAG CACACCCTCA TAATTCCAAG ATATTCTGCT CCTGGTTCAC
354 61  CTGCAGCAGA TTGACAAGCG GAATATCAAA CTCTCTGCCG CGATCCCTAA GCTCCTCCCT
355 21  CAGCAATAAC TGTAAGTACT CTCTCATATC CTCTCCGAAA TTTTTAGCCA TAGGACCGCC
355 81  AGGAATAAGA TTAGGGCAAG CCACAGTACA GATAAACCGA AGTCCTCCCC AGTGAGCATT
356 41  GCCAAATGCA AGACTGCTAT AAGCATGCTG GCTAGACCCG GTGATATCTT CCAGATAATT
357 01  GGACAGAAAA TCGCCCAGGC AATTTTTAAG AAAATCAACA AAAGAAAAAT CCTCCAGGTG
357 61  CACGTTTAGA GCCTCGGGAA CAACGATGGA GTAAATGCAA GCGGTGCGTT CCAGCATGGT
358 21  TAGTTAGCTG ATCTGTAGAA AAAACAAAAA TGAACATTAA ACCATGCTAG CCTGGCGAAC
358 81  AGGTGGGTAA ATCGTTCTTT CCAGCACCAG GCAGGCCACG GGGTCTCCGG CGCGACCCTC
359 41  GTAAAAATTG TCGCTATGAT TGAAAACCAT CACAGAGAGA CGTTCCCGGT GGCCGGCGTG
360 01  AATGATTCGA CAAGACGAAT ACACCCCCGG AACATTGGCG TCCGCGAGTG AAAAAAAGCG
360 61  CCCGAGGAAG CAATAAGGCA CTACAATGCT CAGTCTCAAG TCCAGCAAAG CGATGCCATG
361 21  CGGATGAAGC ACAAAATTCT CAGGTGCGTA CAAAATGTAA TTACTCCCCT CCTGCACAGG
361 81  CAGCAAAGCC CCCGATCCCT CCAGGTACAC ATACAAAGCC TCAGCGTCCA TAGCTTACCG
362 41  AGCAGCAGCG GCACACAACA GGCGCAAAAG TCAGAGAAAG GCTGAGAGCT CTAACCTGTC
363 01  CACCCGCTCT CTGCTCAATA TATAGCCCAG ATCTACACTG ACGTAAAGGC CAAAGTCTAA
363 61  AAATACCCGC CAAATAATCA CACACGCCCA GCACACGCCC AGAAACCGGT GACACACTCA
364 21  GAAAAATACG CGCACTTCCT CAAACGCCCA AACTGCCGTC ATTTCCGGGT TCCCACGCTA
364 81  CGTCATCAAA ATTCAACTTT CAAATTCCGT CGACCGTTAA AAACGTCACC CGCCCCGCCC
365 41  CTAACGGTCG CCGCTCCCGC AGCCAATCAG CGCCCCGCAT CCCCAAATTC AAACGGCTCA
366 01  TTTGCATATT AACGCGCACC AAAAGTTTGA GGTATATTAT TGATGATG  (SEQ ID NO: 2)
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FIG. 6K

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   1 CATCATCAAT AATATACCTC AAACTTTTGG TGCGCGTTAA TATGCAAATG AGCTGTTTGA
  61 ATTTGGGGAG GGAGGAAGGT GATTGGCTGC GGGAGCGGCG ACCGTTAGGG GCGGGGCGGG
 121 TGACGTTTTG ATGACGTGGC TATGAGGCGG AGCCGGTTTG CAAGTTCTCG TGGGAAAAGT
 181 GACGTCAAAC GAGGTGTGGT TTGAACACGG AAATACTCAA TTTTCCCGCG CTCTCTGACA
 241 GGAAATGAGG TGTTTCTGGG CGGATGCAAG TGAAAACGGG CCATTTTCGC GCGAAAACTG
 301 AATGAGGAAG TGAAAATCTG AGTAATTTCG CGTTTATGGC AGGGAGGAGT ATTTGCCGAG
 361 GGCCGAGTAG ACTTTGACCG ATTACGTGGG GGTTTCGATT ACCGTATTTT TCACCTAAAT
 421 TTCCGCGTAC GGTGTCAAAG TCCGGTGTTT TTACGTAGGC GTCAGCTGAT CGCCAGGGTA
 481 TTTAAACCTG CGCTCTCTAG TCAAGAGGCC ACTCTTGAGT GCCAGCGAGT AGAGTTTTCT
 541 CCTCCGCGCC GCGAGTCAGA TCTACACTTT GAAAGATGAG GCACCTGAGA GACCTGCCCG
 601 GTAATGTTTT CCTGGCTACT GGGAACGAGA TTCTGGAATT GGTGGTGGAC GCCATGATGG
 661 GTGACGACCC TCCAGAGCCC CCTACCCCAT TTGAGGCGCC TTCGCTGTAC GATTTGTATG
 721 ATCTGGAGGT GGATGTGCCC GAGAGCGACC CTAACGAGGA GGCGGTGAAT GATTTGTTTA
 781 GCGATGCCGC GCTGCTGGCT GCCGAGCAGG CTAATACGGA CTCTGGCTCA GACAGCGATT
 841 CCTCTCTCCA TACCCCGAGA CCCGGCAGAG GTGAGAAAAA GATCCCCGAG CTTAAAGGGG
 901 AAGAGCTCGA CCTGCGCTGC TATGAGGAAT GCTTGCCTCC GAGCGATGAT GAGGAGGACG
 961 AGGAGGCGAT TCGAGCTGCG GTGAACCAGG GAGTGAAAAC TGCGGGCGAG AGCTTTAGCC
1021 TGGACTGTCC TACTCTGCCC GGACACGGCT GTAAGTCTTG TGAATTTCAT CGCATGAATA
1081 CTGGAGATAA GAATGTGATG TGTGCCCTGT GCTATATGAG AGCTTACAAC CATTGTGTTT
1141 ACAGTAAGTG TGATTAACTT TAGTTGGGAA GGCAGAGGGT GACTGGGTGC TGACTGGTTT
1201 ATTTATGTAT ATGTTTTTTT ATGTGTAGGT CCCGTCTCTG ACGTAGATGA GACCCCCACT
1261 TCAGAGTGCA TTTCATCACC CCCAGAAATT GGCGAGGAAC CGCCCGAAGA TATTATTCAT
1321 AGACCAGTTG CAGTGAGAGT CACCGGGCGG AGAGCAGCTG TGGAGAGTTT GGATGACTTG
1381 CTACAGGGTG GGGATGAACC TTTGGACTTG TGTACCCGGA AACGCCCCAG GCACTAAGTG
1441 CCACACATGT GTGTTTACTT AAGGTGATGT CAGTATTTAT AGGGTGTGGA GTGCAATAAA
1501 ATCCGTGTTG ACTTTAAGTG CGTGTTTTAT GACTCAGGGG TGGGGACTGT GGGTATATAA
1561 GCAGGTGCAG ACCTGTGTGG TCAGTTCAGA GCAGGACTCA TGGAGATCTG GACTGTCTTG
1621 GAAGACTTTC ACCAGACTAG ACAGTTGCTA GAGAACTCAT CGGAGGGAGT CTCTTACCTG
1681 TGGAGATTCT GCTTCGGTGG GCCTCTAGCT AAGCTAGTCT ATAGGGCCAA ACAGGATTAT
1741 AAGGAACAAT TTGAGGATAT TTTGAGAGAG TGTCCTGGTA TTTTTGACTC TCTCAACTTG
1801 GGCCATCAGT CTCACTTTAA CCAGAGTATT CTGAGAGCCC TTGACTTTTC TACTCCTGGC
1861 AGAACTACCG CCGCGGTAGC CTTTTTTGCC TTTATTCTTG ACAAATGGAG TCAAGAAACC
1921 CATTTCAGCA GGGATTACCG TCTGGACTGC TTAGCAGTAG CTTTGTGGAG AACATGGAGG
1981 TGCCAGCGCC TGAATGCAAT CTCCGGCTAC TTGCCAGTAC AGCCGGTAGA CACGCTGAGG
2041 ATCCTGAGTC TCCAGTCACC CCAGGAACAC CAACGCCGCC AGCAGCCGCA GCAGGAGCAG
2101 CAGCAAGAGG AGGACCGAGA AGAGAACCCG AGAGCCGGTC TGGACCCTCC GGTGGCGGAG
2161 GAGGAGGAGT AGCTGACTTG TTTCCCGAGC TGCGCCGGGT GCTGACTAGG TCTTCCAGTG
2221 GACGGGAGAG GGGGATTAAG CGGGAGAGGC ATGAGGAGAC TAGCCACAGA ACTGAACTGA
2281 CTGTCAGTCT GATGAGCCGC AGGCGCCCAG AATCGGTGTG GTGGCATGAG GTGCAGTCGC
2341 AGGGGATAGA TGAGGTCTCG GTGATGCATG AGAAATATTC CCTAGAACAA GTCAAGACTT
2401 GTTGGTTGGA GCCCGAGGAT GATTGGGAGG TAGCCATCAG GAATTATGCC AAGCTGGCTC
2461 TGAAGCCAGA CAAGAAGTAC AAGATTACCA AACTGATTAA TATCAGAAAT TCCTGCTACA
2521 TTTCAGGGAA TGGGGCCGAG GTGGAGATCA GTACCCAGGA GAGGGTGGCC TTCAGATGTT
2581 GTATGATGAA TATGTACCCG GGGGTGGTGG GCATGGAGGG AGTCACCTTT ATGAACACGA
2641 GGTTCAGGGG TGATGGGTAT AATGGGGTGG TCTTTATGGC CAACACCAAG CTGACAGTGC
2701 ACGGATGCTC CTTCTTTGGC TTCAATAACA TGTGCATCGA GGCCTGGGGC AGTGTTTCAG
2761 TGAGGGGATG CAGCTTTTCA GCCAACTGGA TGGGGGTCGT GGGCAGAACC AAGAGCAAGG
2821 TGTCAGTGAA GAAATGCCTG TTCGAGAGGT GCCACCTGGG GGTGATGAGC GAGGGCGAAG
2881 CCAAAGTCAA ACACTGCGCC TCTACCGAGA CGGGCTGCTT TGTGCTGATC AAGGGCAATG
2941 CCCAAGTCAA GCATAACATG ATCTGTGGGG CCTCGGATGA GCGCGGCTAC CAGATGCTGA
3001 CCTGCGCCGG TGGGAACAGC CATATGCTGG CCACCGTGCA TGTGGCCTCG CACCCCCGCA
3061 AGACATGGCC CGAGTTCGAG CACAACGTCA TGACCCGCTG CAATGTGCAC CTGGGCTCCC
3121 GCCGAGGCAT GTTCATGCCC TACCAGTGCA ACATGCAATT TGTGAAGGTG CTGCTGGAGC
3181 CCGATGCCAT GTCCAGAGTG AGCCTGACGG GGGTGTTTGA CATGAATGTG GAGCTGTGGA
3241 AAATTCTGAG ATATGATGAA TCCAAGACCA GGTGCCGGGC CTGCGAATGC GGAGGCAAGC
3301 ACGCCAGGCT TCAGCCCGTG TGTGTGGAGG TGACGGAGGA CCTGCGACCC GATCATTTGG
3361 TGTTGTCCTG CAACGGGACG GAGTTCGGCT CCAGCGGGGA AGAATCTGAC TAGAGTGAGT
3421 AGTGTTTGGG GCTGGGTGTG AGCCTGCATG AGGGGCAGAA TGACTAAAAT CTGTGGTTTT
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FIG. 7A

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3481 CTGTGTGTTG CAGCAGCATG AGCGGAAGCG CCTCCTTTGA GGGAGGGGTA TTCAGCCCTT
3541 ATCTGACGGG GCGTCTCCCC TCCTGGGCGG GAGTGTGTCA GAATGTTATG GNATCCACGG
3601 TGGACGGCCG GCCCGTGCAG CCCGCGAACT CTTCAACCCT GACCTACGCG ACCCTGAGCT
3661 CCTCGTCCGT GGACGCAGCT GCCGCCGCAG CTGCTGCTTC CGCCGCCAGC GCCGTGCGCG
3721 GAATGGCCCT GGGCGCCGGC TACTACAGCT CTCTGGTGGC CAACTCGAGT TCCACCAATA
3781 ATCCCGCCAG CCTGAACGAG GAGAAGCTGC TGCTGCTGAT GGCCCAGCTC GAGGCCCTGA
3841 CCCAGCGCCT GGGCGAGCTG ACCCAGCAGG TGGCTCAGCT GCAGGCGGAG ACGCGGGCCG
3901 CGGTTGCCAC GGTGAAAACC AAATAAAAAA TGAATCAATA AATAAACGGA GACGGTTGTT
3961 GATTTTAACA CAGAGTCTTG AATCTTTATT TGATTTTTCG CGCGCGGTAG GCCCTGGACC
4021 ACCGGTCTCG ATCATTGAGC ACCCGGTGGA TCTTTTCCAG GACCCGGTAG AGGTGGGCTT
4081 GGATGTTGAG GTACATGGGC ATGAGCCCGT CCCGGGGGTG GAGGTAGCTC CATTGCAGGG
4141 CCTCGTGCTC GGGGATGGTG TTGTAAATCA CCCAGTCATA GCAGGGGCGC AGGGCGTGGT
4201 GCTGCACGAT GTCCTTGAGG AGGAGACTGA TGGCCACGGG CAGCCCCTTG GTGTAGGTGT
4261 TGACGAACCT GTTGAGCTGG GAGGGATGCA TGCGGGGGGA GATGAGATGC ATCTTGGCCT
4321 GGATCTTGAG ATTGGCGATG TTCCCGCCCA GATCCCGCCG GGGGTTCATG TTGTGCAGGA
4381 CCACCAGCAC GGTGTATCCG GTGCACTTGG GGAATTTGTC ATGCAACTTG GAAGGGAAGG
4441 CGTGAAAGAA TTTGGAGACG CCCTTGTGAC CGCCCAGGTT TTCCATGCAC TCATCCATGA
4501 TGATGGCGAT GGGCCCGTGG GCGGCGGCCT GGGCAAAGAC GTTTCGGGGG TCGGACACAT
4561 CGTAGTTGTG GTCCTGGGTG AGCTCGTCAT AGGCCATTTT AATGAATTTG GGGCGGAGGG
4621 TGCCCGACTG GGGGACGAAG GTGCCCTCGA TCCCGGGGGC GTAGTTGCCC TCGCAGATCT
4681 GCATCTCCCA GGCCTTGAGC TCGGAGGGGG GGATCATGTC CACCTGCGGG GCGATGAAAA
4741 AAACGGTTTC CGGGGCGGGG GAGATGAGCT GGGCCGAAAG CAGGTTCCGG AGCAGCTGGG
4801 ACTTGCCGCA ACCGGTGGGG CCGTAGATGA CCCCGATGAC CGGCTGCAGG TGGTAGTTGA
4861 GGGAGAGACA GCTGCCGTCC TCGCGGAGGA GGGGGGCCAC CTCGTTCATC ATCTCGCGCA
4921 CATGCATGTT CTCGCGCACG AGTTCCGCCA GGAGGCGCTC GCCCCCCAGC GAGAGGAGCT
4981 CTTGCAGCGA GGCGAAGTTT TTCAGCGGCT TGAGTCCGTC GGCCATGGGC ATTTTGGAGA
5041 GGGTCTGTTG CAAGAGTTCC AGACGGTCCC AGAGCTCGGT GATGTGCTCT AGGGCATCTC
5101 GATCCAGCAG ACCTCCTCGT TTCGCGGGTT GGGGCGACTG CGGGAGTAGG GCACCAGGCG
5161 ATGGGCGTCC AGCGAGGCCA GGGTCCGGTC CTTCCAGGGC CGCAGGGTCC GCGTCAGCGT
5221 GGTCTCCGTC ACGGTGAAGG GGTGCGCGCC GGGCTGGGCG CTTGCGAGGG TGCGCTTCAG
5281 GCTCATCCGG CTGGTCGAGA ACCGCTCCCG GTCGGCGCCC TGCGCGTCGG CCAGGTAGCA
5341 ATTGAGCATG AGTTCGTAGT TGAGCGCCTC GGCCGCGTGG CCCTTGGCGC GGAGCTTACC
5401 TTTGGAAGTG TGTCCGCAGA CGGGACAGAG GAGGGACTTG AGGGCGTAGA GCTTGGGGGC
5461 GAGGAAGACG GACTCGGGGG CGTAGGCGTC CGCGCCGCAG CTGGCGCAGA CGGTCTCGCA
5521 CTCCACGAGC CAGGTGAGGT CGGGGCGGTT GGGGTCAAAA ACGAGGTTTC CTCCGTGCTT
5581 TTTGATGCGT TTCTTACCTC TGGTCTCCAT GAGCTCGTGT CCCCGCTGGG TGACAAAGAG
5641 GCTGTCCGTG TCCCCGTAGA CCGACTTTAT GGGCCGGTCC TCGAGCGGGG TGCCGCGGTC
5701 CTCGTCGTAG AGGAACCCCG CCCACTCCGA GACGAAGGCC CGGGTCCAGG CCAGCACGAA
5761 GGAGGCCACG TGGGAGGGGT AGCGGTCGTT GTCCACCAGC GGGTCCACCT TCTCCAGGGT
5821 ATGCAAGCAC ATGTCCCCCT CGTCCACATC CAGGAAGGTG ATTGGCTTGT AAGTGTAGGC
5881 CACGTGACCG GGGGTCCCGG CCGGGGGGGT ATAAAAGGGG GCGGGCCCCT GCTCGTCCTC
5941 ACTGTCTTCC GGATCGCTGT CCAGGAGCGC CAGCTGTTGG GGTAGGTATT CCCTCTCGAA
6001 GGCGGGCATG ACCTCGGCAC TCAGGTTGTC AGTTTCTAGA AACGAGGAGG ATTTGATATT
6061 GACGGTGCCG TTGGAGACGC CTTTCATGAG CCCCTCGTCC ATTTGGTCAG AAAAGACGAT
6121 CTTTTTGTTG TCGAGCTTGG TGGCGAAGGA GCCGTAGAGG GCGTTGGAGA GCAGCTTGGC
6181 GATGGAGCGC ATGGTCTGGT TCTTTTCCTT GTCGGCGCGC TCCTTGGCGG CGATGTTGAG
6241 CTGCACGTAC TCGCGCGCCA CGCACTTCCA TTCGGGGAAG ACGGTGGTGA GCTCGTCGGG
6301 CACGATTCTG ACCCGCCAGC CGCGGTTGTG CAGGGTGATG AGGTCCACGC TGGTGGCCAC
6361 CTCGCCGCGC AGGGGCTCGT TGGTCCAGCA GAGGCGCCCG CCCTTGCGCG AGCAGAAGGG
6421 GGGCAGCGGG TCCAGCATGA GCTCGTCGGG GGGGTCGGCG TCCACGGTGA AGATGCCGGG
6481 CAGGAGCTCG GGGTCGAAGT AGCTGATGCA GGTGCCCAGA TTGTCCAGCG CCGCTTGCCA
6541 GTCGCGCACG GCCAGCGCGC GCTCGTAGGG GCTGAGGGGC GTGCCCCAGG GCATGGGGTG
6601 CGTGAGCGCG GAGGCGTACA TGCCGCAGAT GTCGTAGACG TAGAGGGGCT CCTCGAGGAC
6661 GCCGATGTAG GTGGGGTAGC AGCGCCCCCC GCGGATGCTG GCGCGCACGT AGTCGTACAG
6721 CTCGTGCGAG GGCGCGAGGA GCCCCGTGCC GAGGTTGGAG CGTTGCGGCT TTTCGGCGCG
6781 GTAGACGATC TGGCGGAAGA TGGCGTGGGA GTTGGAGGAG ATGGTGGGCC TTTGGAAGAT
6841 GTTGAAGTGG GCGTGGGGCA GGCCGACCGA GTCCCTGATG AAGTGGGCGT AGGAGTCCTG
6901 CAGCTTGGCG ACGAGCTCGG CGGTGACGAG GACGTCCAGG GCGCAGTAGT CGAGGGTCTC
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FIG. 7B

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 6961 TTGGATGATG TCATACTTGA GCTGGCCCTT CTGCTTCCAC AGCTCGCGGT TGAGAAGGAA
 7021 CTCTTCGCGG TCCTTCCAGT ACTCTTCGAG GGGGAACCCG TCCTGATCGG CACGGTAAGA
 7081 GCCCACCATG TAGAACTGGT TGACGGCCTT GTAGGCGCAG CAGCCCTTCT CCACGGGGAG
 7141 GGCGTAAGCT TGCGCGGCCT TGCGCAGGGA GGTGTGGGTG AGGGCGAAGG TGTCGCGCAC
 7201 CATGACCTTG AGGAACTGGT GCTTGAAGTC GAGGTCGTCG CAGCCGCCCT GCTCCCAGAG
 7261 TTGGAAGTCC GTGCGCTTCT TGTAGGCGGG GTTAGGCAAA GCGAAAGTAA CATCGTTGAA
 7321 GAGGATCTTG CCCGCGCGGG GCATGAAGTT GCGAGTGATG CGGAAAGGCT GGGGCACCTC
 7381 GGCCCGGTTG TTGATGACCT GGGCGGCGAG GACGATCTCG TCGAAGCCGT TGATGTTGTG
 7441 CCCGACGATG TAGAGTTCCA CGAATCGCGG GCGGCCCTTG ACGTGGGGCA GCTTCTTGAG
 7501 CTCGTCGTAG GTGAGCTCGG CGGGGTCGCT GAGCCCGTGC TGCTCGAGGG CCCAGTCGGC
 7561 GACGTGGGGG TTGGCGCTGA GGAAGGAAGT CCAGAGATCC ACGGCCAGGG CGGTCTGCAA
 7621 GCGGTCCCGG TACTGACGGA ACTGTTGGCC CACGGCCATT TTTTCGGGGG TGACGCAGTA
 7681 GAAGGTGCGG GGGTCGCCGT GCCANCGGTC CCACTTGAGC TGGAGGGCGA GGTCGTGGGC
 7741 GAGCTCGACG AGCGGCGGGT CCCCGGAGAG TTTCATGACC AGCATGAAGG GGACGAGCTG
 7801 CTTGCCGAAG GACCCCATCC AGGTGTAGGT TTCCACATCG TAGGTGAGGA AGAGCCTTTC
 7861 GGTGCGAGGA TGCGAGCCGA TGGGGAAGAA CTGGATCTCC TGCCACCAGT TGGAGGAATG
 7921 GCTGTTGATG TGATGGAAGT AGAAATGCCG ACGGCGCGCC GAGCACTCGT GCTTGTGTTT
 7981 ATACAAGCGT CCGCAGTGCT CGCAACGCTG CACGGGATGC ACGTGCTGCA CGAGCTGTAC
 8041 CTGGGTTCCT TTGGCGAGGA ATTTCAGTGG GCAGTGGAGC GCTGGCGGCT GCATCTCGTG
 8101 CTGTACTACG TCTTGGCCAT CGGCGTGGCC ATCGTCTGCC TCGATGGTGG TCATGCTGAC
 8161 GAGCCCGCGC GGGAGGCAGG TCCAGACCTC GGCTCGGACG GGTCGGAGAG CGAGGACGAG
 8221 GGCGCGCAGG CCGGAGCTGT CCAGGGTCCT GAGACGCTGC GGAGTCAGGT CAGTGGGCAG
 8281 CGGCGGCGCG CGGTTGACTT GCAGGAGCTT TTCCAGGGCG CGCGGGAGGT CCAGATGGTA
 8341 CTTGATCTCC ACGGCGCCGT TGGTGGCTAC GTCCACGGCT TGCAGGGTGC CGTGCCCCTG
 8401 GGGCGCCACC ACCGTGCCCC GTTTCTTCTT GGGCGCTGCT TCCATGTCGG TCAGAAGCGG
 8461 CGGCGAGGAC GCGCGCCGGG CGGCAGGGGC GGCTCGGGGC CCGGAGGCAG GGGCGGCAGG
 8521 GGCACGTCGG CGCCGCGCGC GGGCAGGTTC TGGTACTGCG CCCGGAGAAG ACTGGCGTGA
 8581 GCGACGACGC GACGGTTGAC GTCCTGGATC TGACGCCTCT GGGTGAAGGC CACGGGACCC
 8641 GTGAGTTTGA ACCTGAAAGA GAGTTCGACA GAATCAATCT CGGTATCGTT GACGGCGGCC
 8701 TGCCGCAGGA TCTCTTGCAC GTCGCCCGAG TTGTCCTGGT AGGCGATCTC GGTCATGAAC
 8761 TGCTCGATCT CCTCCTCCTG AAGGTCTCCG CGGCCGGCGC GCTCGACGGT GGCCGCGAGG
 8821 TCGTTGGAGA TGCGGCCCAT GAGCTGCGAG AAGGCGTTCA TGCCGGCCTC GTTCCAGACG
 8881 CGGCTGTAGA CCACGGCTCC GTCGGGGTCG CGCGCGCGCA TGACCACCTG GGCGAGGTTG
 8941 AGCTCGACGT GGCGCGTGAA GACCGCGTAG TTGCAGAGGC GCTGGTAGAG GTAGTTGAGC
 9001 GTGGTGGCGA TGTGCTCGGT GACGAAGAAG TACATGATCC AGCGGCGGAG CGGCATCTCG
 9061 CTGACGTCGC CCAGGGCTTC CAAGCGTTCC ATGGCCTCGT AGAAGTCCAC GGCGAAGTTG
 9121 AAAAACTGGG AGTTGCGCGC CGAGACGGTC AACTCCTCCT CCAGAAGACG GATGAGCTCG
 9181 GCGATGGTGG CGCGCACCTC GCGCTCGAAG GCCCCGGGGG GCTCCTCTTC CATCTCCTCC
 9241 TCTTCCTCCT CCACTAACAT CTCTTCTACT TCCTCCTCAG GAGGCGGTGG CGGGGGAGGG
 9301 GCCCTGCGTC GCCGGCGGCG CACGGGCAGA CGGTCGATGA AGCGCTCGAT GGTCTCCCCG
 9361 CGCCGGCGAC GCATGGTCTC GGTGACGGCG CGCCCGTCCT CGCGGGGCCG CAGCATGAAG
 9421 ACGCCGCCGC GCATCTCCAG GTGGCCGCCG GGGGGGTCTC CGTTGGGCAG GGAGAGGGCG
 9481 CTGACGATGC ATCTTATCAA TTGACCCGTA GGGACTCCGC GCAAGGACCT GAGCGTCTCG
 9541 AGATCCACGG GATCCGAAAA CCGCTGAACG AAGGCTTCGA GCCAGTCGCA GTCGCAAGGT
 9601 AGGCTGAGCC CGGTTTCTTG TTCTTCGGGT ATTTGGTCGG GAGGCGGCGG GCGATGCTGC
 9661 TGGTGATGAA GTTGAAGTAG GCGGTCCTGA GACGGCGGAT GGTGGCGAGG AGCACCAGGT
 9721 CCTTGGGCCC GGCTTGCTGG ATGCGCAGAC GGTCGGCCAT GCCCCAGGCG TGGTCCTGAC
 9781 ACCTGGCGAG GTCCTTGTAG TAGTCCTGCA TGAGCCGCTC CACGGGCACC TCCTCCTCGC
 9841 CCGCGCGGCC GTGCATGCGC GTGAGCCCGA ACCCGCGCTG CGGCTGGACG AGCGCCAGGT
 9901 CGGCGACGAC GCGCTCGGTG AGGATGGCCT GCTGGATCTG GGTGAGGGTG GTCTGGAAGT
 9961 CGTCGAAGTC GACGAAGCGG TGGTAGGCTC CGGTGTTGAT GGTGTAGGAG CAGTTGGCCA
10021 TGACGGACCA GTTGACGGTC TGGTGGCCGG GTCGCACGAG CTCGTGGTAC TTGAGGCGCG
10081 AGTAGGCGCG CGTGTCGAAG ATGTAGTCGT TGCAGGCGCG CACGAGGTAC TGGTATCCGA
10141 CGAGGAAGTG CGGCGGCGGC TGGCGGTAGA GCGGCCATCG CTCGGTGGCG GGGGCGCCGG
10201 GCGCGAGGTC CTCGAGCATG AGGCGGTGGT AGCCGTAGAT GTACCTGGAC ATCCAGGTGA
10261 TGCCGGCGGC GGTGGTGGAG GCGCGCGGGA ACTCGCGGAC GCGGTTCCAG ATGTTGCGCA
10321 GCGGCAGGAA GTAGTTCATG GTGGCCGCGG TCTGGCCCGT GAGGCGCGCG CAGTCGTGGA
10381 TGCTCTAGAC ATACGGGCAA AAACGAAAGC GGTCAGCGGC TCGACTCCGT GGCCTGGAGG
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FIG. 7C

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10441 CTAAGCGAAC GGGTTGGGCT GCGCGTGTAC CCCGGTTCGA ATCTCGAATC AGGCTGGAGC
10501 CGCAGCTAAC GTGGTACTGG CACTCCCGTC TCGACCCAAG CCTGCTAACG AAACCTCCAG
10561 GATACGGAGG CGGGTCGTTT TTTGGCCTTG GTCGCTGGTC ATGAAAAACT AGTAAGCGCG
10621 GAAAGCGGCC GCCCGCGATG GCTCGCTGCC GTAGTCTGGA GAAAGAATCG CCAGGGTTGC
10681 GTTGCGGTGT GCCCCGGTTC GAGCCTCAGC GCTCGGCGCC GGCCGGATTC CGCGGCTAAC
10741 GTGGGCGTGG CTGCCCCGTC GTTTCCAAGA CCCCTTAGCC AGCCGACTTC TCCAGTTACG
10801 GAGCGAGCCC CTCTTTTTTT TTCTTGTGTT TTTGCCAGAT GCATCCCGTA CTGCGGCAGA
10861 TGCGCCCCCA CCCTCCACCA CAACCGCCCC TACCGCAGCA GCAGCAACAG CCGGCGCTTC
10921 TGCCCCCGCC CCAGCAGCAG CCAGCCACTA CCGCGGCGGC CGCCGTGAGC GGAGCCGGCG
10981 TTCAGTATGA CCTGGCCTTG GAAGAGGGCG AGGGGCTGGC GCGGCTGGGG GCGTCGTCGC
11041 CGGAGCGGCA CCCGCGCGTG CAGATGAAAA GGGACGCTCG CGAGGCCTAC GTGCCCAAGC
11101 AGAACCTGTT CAGAGACAGG AGCGGCGAGG AGCCCGAGGA GATGCGCGCC TCCCGCTTCC
11161 ACGCGGGGCG GGAGCTGCGG CGCGGCCTGA ACCGAAAGCG GGTGCTGAGG GACGAGGATT
11221 TCGAGGCGGA CGAGCTGACG GGGATCAGCC CCGTGCGCGC GCACGTGGTC GNGGNCAACC
11281 TGGTCACGGC GTACGAGCAG ACCGTGAAGG AGGAGAGCAA CTTCCAAAAA TCCTTCAACA
11341 ACCACGTGCG CACCTTGATC GCGCGCGAGG AGGTGACCCT GGGCCTGATG CACCTGTGGG
11401 ACCTGCTGGA GGCCATCGTG CAGAACCCCA CGAGCAAGCC GCTGACGGCG CAGCTGTTTC
11461 TGGTGGTGCA GCACAGTCGG GACAACGAGA CGTTCAGGGA GGCGCTGCTG AATATCACCG
11521 AGCCCGAGGG CCGCTGGCTC CTGGACCTGG TGAACATTTT GCAGAGCATC GTGGTGCAGG
11581 AGCGCGGGCT GCCGCTGTCC GAGAAGCTGG CGGCCATCAA CTTCTCGGTG CTGAGTCTGG
11641 GCAAGTACTA CGCTAGGAAG ATCTACAAGA CCCCGTACGT GCCCATAGAC AAGGAGGTGA
11701 AGATCGACGG GTTTTACATG CGCATGACCC TGAAAGTGCT GACCCTGAGC GACGATCTGG
11761 GGGTGTACCG CAACGACAGG ATGCACCGCG CGGTGAGCGC CAGCCGCCGG CGCGAGCTGA
11821 GCGACCAGGA GCTGATGCAC AGCCTGCAGC GGGCCCTGAC CGGGGCCGGG ACCGAGGGGG
11881 AGAGCTACTT TGACATGGGC GCGGACCTGC GCTGGCAGCC CAGCCGCCGG GCCTTGGAAG
11941 CTGCCGGCGG TTCCCCCTAC GTGGAGGAGG TGGACGATGA GGAGGAGGAG GGCGAGTACC
12001 TGGAAGACTG ATGGCGGGAC CGTATTTTTG CTAGATGCAG CAACAGCCAC CGCCGCCGCC
12061 TCCTGATCCC GCGATGCGGG CGGCGCTGCA GAGCCAGCCG TCCGGCATTA ACTCCTCGGA
12121 CGATTGGACC CAGGCCATGC AACGCATCAT GGCGCTGACG ACCCGCAATC CCGAAGCCTT
12181 TAGACAGCAG CCTCAGGCCA ACCGGCTCTC GGCCATCCTG GAGGCCGTGG TGCCCTCGCG
12241 CTCGAACCCC ACGCACGAGA AGGTGCTGGC CATCGTGAAC GCGCTGGTGG AGAACAAGGC
12301 CATCCGCGGT GACGAGGCCG GGCTGGTGTA CAACGCGCTG CTGGAGCGCG TGGCCCGCTA
12361 CAACAGCACC AACGTGCAGA CGAACCTGGA CCGCATGGTG ACCGACGTGC GCGAGGCGGT
12421 GTCGCAGCGC GAGCGGTTCC ACCGCGAGTC GAACCTGGGC TCCATGGTGG CGCTGAACGC
12481 CTTCCTGAGC ACGCAGCCCG CCAACGTGCC CCGGGGCCAG GAGGACTACA CCAACTTCAT
12541 CAGCGCGCTG CGGCTGATGG TGGCCGAGGT GCCCCAGAGC GAGGTGTACC AGTCGGGGCC
12601 GGACTACTTC TTCCAGACCA GTCGCCAGGG CTTGCAGACC GTGAACCTGA GCCAGGCTTT
12661 CAAGAACTTG CAGGGACTGT GGGGCGTGCA GGCCCCGGTC GGGGACCGCG CGACGGTGTC
12721 GAGCCTGCTG ACGCCGAACT CGCGCCTGCT GCTGCTGCTG GTGGCGCCCT TCACGGACAG
12781 CGGCAGCGTG AGCCGCGACT CGTACCTGGG CTACCTGCTT AACCTGTACC GCGAGGCCAT
12841 CGGACAGGCG CACGTGGACG AGCAGACCTA CCAGGAGATC ACCCACGTGA GCCGCGCGCT
12901 GGGCCAGGAG GACCCGGGCA ACCTGGAGGC CACCCTGAAC TTCCTGCTGA CCAACCGGTC
12961 GCAGAAGATC CCGCCCCAGT ACGCGCTGAG CACCGAGGAG GAGCGCATCC TGCGCTACGT
13021 GCAGCAGAGC GTGGGGCTGT TCCTGATGCA GGAGGGGGCC ACGCCCAGCG CGGCGCTCGA
13081 CATGACCGCG CGCAACATGG AGCCCAGCAT GTACGCCCGC AACCGCCCGT TCATCAATAA
13141 GCTGATGGAC TACTTGCATC GGGCGGCCGC CATGAACTCG GACTACTTTA CCAACGCCAT
13201 CTTGAACCCG CACTGGCTCC CGCCGCCCGG GTTCTACACG GGCGAGTACG ACATGCCCGA
13261 CCCCAACGAC GGGTTCCTGT GGGACGACGT GGACAGCAGC GTGTTCTCGC CGCGTCCAGG
13321 AACCAATGCC GTGTGGAAGA AAGAGGGCGG GGACCGGCGG CCGTCCTCGG CGCTGTCCGG
13381 TCGCGCGGGT GCTGCCGCGG CGGTGCCCGA GGCCGCCAGC CCCTTCCCGA GCCTGCCCTT
13441 TTCGCTGAAC AGCGTGCGCA GCAGCGAGCT GGGTCGGCTG ACGCGACCGC GCCTGCTGGG
13501 CGAGGAGGAG TACCTGAACG ACTCCTTGTT GAGGCCCGAG CGCGAGAAGA ACTTCCCCAA
13561 TAACGGGATA GAGAGCCTGG TGGACAAGAT GAGCCGCTGG AAGACGTACG CGCACGAGCA
13621 CAGGGACGAG CCCCGAGCTA GCAGCGCAGG CACCCGTAGA CGCCAGCGGC ACGACAGGCA
13681 GCGGGGACTG GTGTGGGACG ATGAGGATTC CGCCGACGAC AGCAGCGTGT TGGACTTGGG
13741 TGGGAGTGGT GGTAACCCGT TCGCTCACCT GCGCCCCCGT ATCGGGCGCC TGATGTAAGA
13801 ATCTGAAAAA ATAAAAGACG GTACTCACCA AGGCCATGGC GACCAGCGTG CGTTCTTCTC
13861 TGTTGTTTGT AGTAGTATGA TGAGGCGCGT GTACCCGGAG GGTCCTCCTC CCTCGTACGA
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FIG. 7D

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13921 GAGCGTGATG CAGCAGGCGG TGGCGGCGGC GATGCAGCCC CCGCTGGAGG CGCCTTACGT
13981 GCCCCCGCGG TACCTGGCGC CTACGGAGGG GCGGAACAGC ATTCGTTACT CGGAGCTGGC
14041 ACCCTTGTAC GATACCACCC GGTTGTACCT GGTGGACAAC AAGTCGGCAG ACATCGCCTC
14101 GCTGAACTAC CAGAACGACC ACAGCAACTT CCTGACCACC GTGGTGCAGA ACAACGATTT
14161 CACCCCCACG GAGGCCAGCA CCCAGACCAT CAACTTTGAC GAGCGCTCGC GGTGGGGCGG
14221 CCAGCTGAAA ACCATCATGC ACACCAACAT GCCCAACGTG AACGAGTTCA TGTACAGCAA
14281 CAAGTTCAAG GCGCGGGTGA TGGTCTCGCG CAAGACCCCC AACGGGGTGG ATGATGATTA
14341 TGATGGTAGT CAGGACGAGC TGACCTACGA GTGGGTGGAG TTTGAGCTGC CCGAGGGCAA
14401 CTTCTCGGTG ACCATGACCA TCGATCTGAT GAACAACGCC ATCATCGACA ACTACTTGGC
14461 GGTGGGGCGG CAGAACGGGG TGCTGGAGAG CGACATCGGC GTGAAGTTCG ACACGCGCAA
14521 CTTCCGGCTG GGCTGGGACC CCGTGACCGA GCTGGTGATG CCGGGCGTGT ACACCAACGA
14581 GGCCTTCCAC CCCGACATCG TCCTGCTGCC CGGCTGCGGC GTGGACTTCA CCGAGAGCCG
14641 CCTCAGCAAC CTGCTGGGCA TCCGCAAGCG GCAGCCCTTC CAGGAGGGCT TCCAGATCCT
14701 GTACGAGGAC CTGGAGGGGG GCAACATCCC CGCGCTCTTG GATGTCGAAG CCTACGAGAA
14761 AAGCAAGGAG GATAGCACCG CCGCGGCGAC CGCAGCCGTG GCCACCGCCT CTACCGAGGT
14821 GCGGGGCGAT AATTTTGCTA GCGCTGCGGC AGCGGCCGAG GCGGCTGAAA CCGAAAGTAA
14881 GATAGTCATC CAGCCGGTGG AGAAGGACAG CAAGGACAGG AGCTACAACG TGCTCGCGGA
14941 CAAGAAAAAC ACCGCCTACC GCAGCTGGTA CCTGGCCTAC AACTACGGCG ACCCCGAGAA
15001 GGGCGTGCGC TCCTGGACGC TGCTCACCAC CTCGGACGTC ACCTGCGGCG TGGAGCAAGT
15061 CTACTGGTCG CTGCCCGACA TGATGCAAGA CCCGGTCACC TTCCGCTCCA CGCGTCAAGT
15121 TAGCAACTAC CCGGTGGTGG GCGCCGAGCT CCTGCCCGTC TACTCCAAGA GCTTCTTCAA
15181 CGAGCAGGCC GTCTACTCGC AGNAGCTGCG CGCCTTCACC TCGCTCACGC ACGTCTTCAA
15241 CCGCTTCCCC GAGAACCAGA TCCTCGTCCG CCGCCGCGCC CACCATTACC ACCGTCAGTG
15301 AAAACGTTCC TGCTCTCACA GATCACGGGA CCCTGCCGCT GCGCAGCAGT ATCCGGGGAG
15361 TCCAGCGCGT GACCGTCACT GACGCCAGAC GCCGCACCTG CCCCTACGTC TACAAGGCCC
15421 TGGGCGTAGT CGCGCCGCGC GTCCTCTCGA GCCGCACCTT CTAAAAAATG TCCATTCTCA
15481 TCTCGCCCAG TAATAACACC GGTTGGGGCC TGCGCGCGCC CAGCAAGATG TACGGAGGCG
15541 CTCGCCAACG CTCCACGCAA CACCCCGTGC GCGTGCGCGG GCACTTCCGC GCTCCCTGGG
15601 GCGCCCTCAA GGGCCGCGTG CGCTCGCGCA CCACCGTCGA CGACGTGATC GACCAGGTGG
15661 TGGCCGACGC GCGCAACTAC ACGCCCGCCG CCGCGCCCGT CTCCACCGTG GACGCCGTCA
15721 TCGACAGCGT GGTGGCCGAC GCGCGCCGGT ACGCCCGCAC CAAGAGCCGG CGGCGGCGCA
15781 TCGCCCGGCG GCACCGGAGC ACCCCCGCCA TGCGCGCGGC GCGAGCCTTG CTGCGCAGGG
15841 CCAGGCGCAC GGGACGCAGG GCCATGCTCA GGGCGGCCAG ACGCGCGGCC TCCGGCAGCA
15901 GCAGCGCCGG CAGGACCCGC AGACGCGCGG CCACGGCGGC GGCGGCGGCC ATCGCCAGCA
15961 TGTCCCGCCC GCGGCGCGGC AACGTGTACT GGGTGCGCGA CGCCGCCACC GGTGTGCGCG
16021 TGCCCGTGCG CACCCGCCCC CCTCGCACTT GAAGATGCTG ACTTCGCGAT GTTGATGTGT
16081 CCCAGCGGCG AGGAGGATGT CCAAGCGCAA ATACAAGGAA GAGATGCTCC AGGTCATCGC
16141 GCCTGAGATC TACGGCCCCG CGGCGGCGGT GAAGGAGGAA AGAAAGCCCC GCAAACTGAA
16201 GCGGGTCAAA AAGGACAAAA AGGAGGAGGA AGATGACGGA CTGGTGGAGT TTGTGCGCGA
16261 GTTCGCCCCC CGGCGGCGCG TGCAGTGGCG CGGGCGGAAA GTGAAACCGG TGCTGCGGCC
16321 CGGCACCACG GTGGTCTTCA CGCCCGGCGA GCGTTCCGGC TCCGCCTCCA AGCGCTCCTA
16381 CGACGAGGTG TACGGGGACG AGGACATCCT CGAGCAGGCG GTCGAGCGTC TGGGCGAGTT
16441 TGCGTACGGC AAGCGCAGCC GCCCCGCGCC CTTGAAAGAG GAGGCGGTGT CCATCCCGCT
16501 GGACCACGGC AACCCCACGC CGAGCCTGAA GCCGGTGACC CTGCAGCAGG TGCTACCGAG
16561 CGCGGCGCCG CGCCGGGGCT TCAAGCGCGA GGGCGGCGAG GATCTGTACC CGACCATGCA
16621 GCTGATGGTG CCCAAGCGCC AGAAGCTGGA GGACGTGCTG GAGCACATGA AGGTGGACCC
16681 CGAGGTGCAG CCCGAGGTCA AGGTGCGGCC CATCAAGCAG GTGGCCCCGG GCCTGGGCGT
16741 GCAGACCGTG GACATCAAGA TCCCCACGGA GCCCATGGAA ACGCAGACCG AGCCCGTGAA
16801 GCCCAGCACC AGCACCATGG AGGTGCAGAC GGATCCCTGG ATGCCAGCAC CAGCTTCCAC
16861 CAGCACTCGC CGAAGACGCA AGTACGGCGC GGCCAGCCTG CTGATGCCCA ACTACGCGGC
16921 TGCATCCTTC CATCATCCCC ACGCCGGGCT ACCGCGGCAC GCGCTTCTAC CGCGGCTACA
16981 CCAGCAGCCG CCGCCGCAAG ACCACCACCC GCCGCCGTCG TCGCAGCCGC CGCAGCAGCA
17041 CCGCGACTTC CGCCTTGGTG CGGAGAGTGT ATCGCAGCGG GCGCGAGCCT CTGACCCTGC
17101 CGCGCGCGCG CTACCACCCG AGCATCGCCA TTTAACTACC GCCTCCTACT TGCAGATATG
17161 GCCCTCACAT GCCGCCTCCG CGTCCCCATT ACGGGCTACC GAGGAAGAAA GCCGCGCCGT
17221 AGAAGGCTGA CGGGGAACGG GCTGCGTCGC CATCACCACC GGCGGCGGCG CGCCATCAGC
17281 AAGCGGTTGG GGGGAGGCTT CCTGCCCGCG CTGATCCCCA TCATCGCCGC GGCGATCGGG
17341 GCGATCCCCG GCATAGCTTC CGTGGCGGTG CAGGCCTCTC AGCGCCACTG AGACACAAAA
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FIG. 7E

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17401 AAGCATGGAT TTGTAATAAA AAAAAAAATG GACTGACGCT CCTGGTCCTG TGATGTGTGT
17461 TTTTAGATGG AAGACATCAA TTTTTCGTCC CTGGCACCGC GACACGGCAC GCGGCCGTTT
17521 ATGGGCACCT GGAGCGACAT CGGCAACAGC CAACTGAACG GGGGCGCCTT CAATTGGAGC
17581 AGTCTCTGGA GCGGGCTTAA GAATTTCGGG TCCACGCTCA AAACCTATGG CAACAAGGCG
17641 TGGAACAGCA GCACAGGGCA GGCGCTGAGG GAAAAGCTGA AAGAACAGAA CTTCCAGCAG
17701 AAGGTGGTTG ATGGCCTGGC CTCAGGCATC AACGGGGTGG TTGACCTGGC CAACCAGGCC
17761 GTGCAGAAAC AGATCAACAG CCGCCTGGAC GCGGTCCCGC CCGCGGGGTC CGTGGAGATG
17821 CCCCAGGTGG AGGAGGAGCT GCCTCCCCTG GACAAGCGCG GCGACAAGCG ACCGCGTCCC
17881 GACGCGGAGG AGACGCTGCT GACGCACACG GACGAGCCGC CCCCGTACGA GGAGGCGGTG
17941 AAACTGGGCC TGCCCACCAC GCGGCCCGTG GCGCCTCTGG CCACCGGAGT GCTGAAACCC
18001 AGCAGCAGCC AGCCCGCGAC CCTGGACTTG CCTCCGCCTC GCCCCTCCAC AGTGGCTAAG
18061 CCCCTGCCGC CGGTGGCCGT CGCGTCGCGC GCCCCCCGAG GCCGCCCCCA GGCGAACTGG
18121 CAGAGCACTC TGAACAGCAT CGTGGGTCTG GGAGTGCAGA GTGTGAAGCG CCGCCGCTGC
18181 TATTAAAAGA CACTGTAGCG CTTAACTTGC TTGTCTGTGT GTATATGTAT GTCCGCCGAC
18241 CAGAAGGAGG AGTGTGAAGA GGCGCGTCGC CGAGTTGCAA GATGGCCACC CCATCGATGC
18301 TGCCCCAGTG GGCGTACATG CACATCGCCG GACAGGACGC TTCGGAGTAC CTGAGTCCGG
18361 GTCTGGTGCA GTTCGCCCGC GCCACAGACA CCTACTTCAG TCTGGGGAAC AAGTTTAGGA
18421 ACCCCACGGT GGCGCCCACG CACAATGTGA CCACCGACCG CAGCCAGCGG CTGACGGTGC
18481 GCTTCGTGCC CGTGGACCGC GAGGACAACA CCTACTCGTA CAAAGTGCGC TACACGCTGG
18541 CCGTGGGCGA CAACCGCGTG CTGGACATGG CCAGCACCTA CTTTGACATC CGCGGCGTGC
18601 TGGACCGGGG CCCTAGCTTC AAACCCTACT CTGGCACCGC CTACAACAGC CTAGCTCCCA
18661 AGGGAGCTCC CAATTCCAGC CAGTGGGAGC AAGCAAAAAC AGGCAATGGG GGAACTATGG
18721 AAACACACAC ATATGGTGTG GCCCCAATGG GCGGAGAGAA TATTACAAAA GATGGTCTTC
18781 AAATTGGAAC TGACGTTACA GCGAATCAGA ATAAACCAAT TTATGCCGAC AAAACATTTC
18841 AACCAGAACC GCAAGTAGGA GAAGAAAATT GGCAAGAAAC TGAAAACTTT TATGGCGGTA
18901 GAGCTCTTAA AAAAGACACA AACATGAAAC CTTGCTATGG CTCCTATGCT AGACCCACCA
18961 ATGAAAAAGG AGGTCAAGCT AAACTTAAAG TTGGAGATGA TGGAGTTCCA ACCAAAGAAT
19021 TCGACATAGA CCTGGCTTTC TTTGATACTC CCGGTGGCAC CGTGAACGGT CAAGACGAGT
19081 ATAAAGCAGA CATTGTCATG TATACCGAAA ACACGTATTT GGAAACTCCA GACACGCATG
19141 TGGTATACAA ACCAGGCAAG GATGATGCAA GTTCTGAAAT TAACCTGGTT CAGCAGTCTA
19201 TGCCCAACAG ACCCAACTAC ATTGGGTTCA GGGACAACTT TATCGGTCTT ATGTACTACA
19261 ACAGCACTGG CAATATGGGT GTGCTTGCTG GTCAGGCCTC CCAGCTGAAT GCTGTGGTTG
19321 ATTTGCAAGA CAGAAACACC GAGCTGTCCT ACCAGCTCTT GCTTGACTCT TTGGGTGACA
19381 GAACCCGGTA TTTCAGTATG TGGAACCAGG CGGTGGACAG TTATGACCCC GATGTGCGCA
19441 TCATCGAAAA CCATGGTGTG GAGGATGAAT TGCCAAACTA TTGCTTCCCC TTGGACGGCT
19501 CTGGCACTAA CGCCGCATAC CAAGGTGTGA AAGTAAAAGA TGGTCAAGAT GGTGATGTTG
19561 AGAGTGAATG GGAAAATGAC GATACTGTTG CAGCTCGAAA TCAATTATGT AAAGGTAACA
19621 TTTTCGCCAT GGAGATTAAT CTCCAGGCTA ACCTGTGGAG AAGTTTCCTC TACTCGAACG
19681 TGGCCCTGTA CCTGCCCGAC TCCTACAAGT ACACGCCGAC CAACGTCACG CTGCCGACCA
19741 ACACCAACAC CTACGATTAC ATGAATGGCA GAGTGACACC TCCCTCGCTG GTAGACGCCT
19801 ACCTCAACAT CGGGGCGCGC TGGTCGCTGG ACCCCATGGA CAACGTCAAC CCCTTCAACC
19861 ACCACCGCAA CGCGGGCCTG CGCTACCGCT CCATGCTCCT GGGCAACGGG CGCTACGTGC
19921 CCTTCCACAT CCAGGTGCCC CAAAAGTTTT TCGCCATCAA GAGCCTCCTG CTCCTGCCCG
19981 GGTCCTACAC CTACGAGTGG AACTTCCGCA AGGACGTCAA CATGATCCTG CAGAGCTCCC
20041 TAGGCAACGA CCTGCGCACG GACGGGGCCT CCATCGCCTT CACCAGCATC AACCTCTACG
20101 CCACCTTCTT CCCCATGGCG CACAACACCG CCTCCACGCT CGAGGCCATG CTGCGCAACG
20161 ACACCAACGA CCAGTCCTTC AACGACTACC TCTCGGCGGC CAACATGCTC TACCCCATCC
20221 CGGCCAACGC CACCAACGTG CCCATCTCCA TCCCCTCGCG CAACTGGGCC GCCTTCCGCG
20281 GATGGTCCTT CACGCGCCTG AAGACCCGCG AGACGCCCTC GCTCGGCTCC GGGTTCGACC
20341 CCTACTTCGT CTACTCGGGC TCCATCCCCT ACCTAGACGG CACCTTCTAC CTCAACCACA
20401 CCTTCAAGAA GGTCTCCATC ACCTTCGACT CCTCCGTCAG CTGGCCCGGC AACGACCGCC
20461 TCCTGACGCC CAACGAGTTC GAAATCAAGC GCACCGTCGA CGGAGAGGGA TACAACGTGG
20521 CCCAGTGCAA CATGACCAAG GACTGGTTCC TGGTCCAGAT GCTGGCCCAC TACAACATCG
20581 GCTACCAGGG CTTCTACGTG CCCGAGGGCT ACAAGGACCG CATGTACTCC TTCTTCCGCA
20641 ACTTCCAGCC CATGAGCCGC CAGGTCGTGG ACGAGGTCAA CTACAAGGAC TACCAGGCCG
20701 TCACCCTGGC CTACCAGCAC AACAACTCGG GCTTCGTCGG CTACCTCGCG CCCACCATGC
20761 GCCAGGGCCA GCCCTACCCC GCCAACTACC CCTACCCGCT CATCGGCAAG AGCGCCGTCG
20821 CCAGCGTCAC CCAGAAAAAG TTCCTCTGCG ACCGGGTCAT GTGGCGCATC CCCTTCTCCA
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FIG. 7F

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21661 GCTTCCTCAA TGCCCACTCC GCCTACTTTC GCTCCCACCG CGCGCGCATC GAGAAGGCCA
20881 GCAACTTCAT GTCCATGGGC GCGCTCACCG ACCTCGGCCA GAACATGCTC TACGCCAACT
20941 CCGCCCACGC GCTAGACATG AATTTCGAAG TCGACCCCAT GGATGAGTCC ACCCTTCTCT
21001 ATGTTGTCTT CGAAGTCTTC GACGTCGTCC GAGTGCACCA GCCCCACCGC GGCGTCATCG
21061 AAGCCGTCTA CCTGCGCACG CCCTTCTCGG CCGGCAACGC CACCACCTAA GCCGCTCTTG
21121 CTTCTTGCAA GATGACGGCG GGCTCCGGCG AGCAGGAGCT CAGGGCCATC CTCCGCGACC
21181 TGGGCTGCGG GCCCTGCTTC CTGGGCACCT TCGACAAGCG CTTCCCTGGA TTCATGGCCC
21241 CGCACAAGCT GGCCTGCGCC ATCGTGAACA CGGCCGGCCG CGAGACCGGG GGCGAGCACT
21301 GGCTGGCCTT CGCCTGGAAC CCGCGCTCCC ACACATGCTA CCTCTTCGAC CCCTTCGGGT
21361 TCTCGGACGA GCGCCTCAAG CAGATCTACC AGTTCGAGTA CGAGGGCCTG CTGCGTCGCA
21421 GCGCCCTGGC CACCGAGGAC CGCTGCGTCA CCCTGGAAAA GTCCACCCAG ACCGTGCAGG
21481 GTCCGCGCTC GGCCGCCTGC GGGCTCTTCT GCTGCATGTT CCTGCACGCC TTCGTGCACT
21541 GGCCCGACCG CCCCATGGAC AAGAACCCCA CCATGAACTT ACTGACGGGG GTGCCCAACG
21601 GCATGCTCCA GTCGCCCCAG GTGGAACCCA CCCTGCGCCG CAACCAGGAA GCGCTCTACC
21721 CCGCCTTCGA CCGCATGAAT CAAGACATGT AAAAAACCGG TGTGTGTATG TGAATGCTTT
21781 ATTCATAATA AACAGCACAT GTTTATGCCA CCTTCTCTGA GGCTCTGACT TTATTTAGAA
21841 ATCGAAGGGG TTCTGCCGGC TCTCGGCATG GCCCGCGGGC AGGGATACGT TGCGGAACTG
21901 GTACTTGGGC AGCCACTTGA ACTCGGGGAT CAGCAGCTTG GGCACGGGGA GGTCGGGGAA
21961 CGAGTCGCTC CACAGCTTGC GCGTGAGTTG CAGGGCGCCC AGCAGGTCGG GCGCGGAGAT
22021 CTTGAAATCG CAGTTGGGAC CCGCGTTCTG CGCGCGAGAG TTGCGGTACA CGGGGTTGCA
22081 GCACTGGAAC ACCATCAGGG CCGGGTGCTT CACGCTTGCC AGCACCGTCG CGTCGGTGAT
22141 GCCCTCCACG TCCAGATCCT CGGCGTTGGC CATCCCGAAG GGGGTCATCT TGCAGGTCTG
22201 CCGCCCCATG CTGGGCACGC AGCCGGGCTT GTGGTTGCAA TCGCAGTGCA GGGGGATCAG
22261 CATCATCTGG GCCTGCTCGG AGCTCATGCC CGGGTACATG GCCTTCATGA AAGCCTTCAG
22321 CTGGCGGAAG GCCTGCTGCG CCTTGCCGCC CTCGGTGAAG AAGACCCCGC AGGACTTGCT
22381 AGAGAACTGG TTGGTGGCGC AGCCGGCGTC GTGCACGCAG CAGCGCGCGT CGTTGTTGGC
22441 CAGCTGCACC ACGCTGCGCC CCCAGCGGTT CTGGGTGATC TTGGCCCGGT TGGGGTTCTC
22501 CTTCAGCGCG CGCTGCCCGT TCTCGCTCGC CACATCCATC TCGATAGTGT GCTCCTTCTG
22561 GATCATCACG GTCCCGTGCA GGCACCGCAG CTTGCCCTCG GCTTCGGTGC AGCCGTGCAG
22621 CCACAGCGCG CAGCCGGTGC ACTCCCAGTT CTTGTGGGCG ATCTGGGAGT GCGAGTGCAC
22681 GAAGCCCTGC AGGAAGCGGC CCATCATCGC GGTCAGGGTC TTGTTGCTGG TGAAGGTCAG
22741 CGGGATGCCG CGGTGCTCCT CGTTCACATA CAGGTGGCAG ATGCGGCGGT ACACCTCGCC
22801 CTGCTCGGGC ATCAGCTGGA AGGCGGACTT CAGGTCGCTC TCCACGCGGT ACCGGTCCAT
22861 CAGCAGCGTC ATCACTTCCA TGCCCTTCTC CCAGGCCGAA ACGATCGGCA GGCTCAGGGG
22921 GTTCTTCACC GCCATTGTCA TCTTAGTCGC CGCCGCCGAG GTCAGGGGGT CGTTCTCGTC
22981 CAGGGTCTCA AACACTCGCT TGCCGTCCTT CTCGATGATG CGCACGGGGG GAAAGCTGAA
23041 GCCCACGGCC GCCAGCTCCT CCTCGGCCTG CCTTTCGTCC TCGCTGTCCT GGCTGATGTC
23101 TTGCAAAGGC ACATGCTTGG TCTTGCGGGG TTTCTTTTTG GGCGGCAGAG GCGGCGGCGA
23161 TGTGCTGGGA GAGCGCGAGT TCTCGTTCAC CACGACTATT TCTTCTTCTT GGCCGTCGTC
23221 CGAGACCACG CGGCGGTAGG CATGCCTCTT CTGGGGCAGA GGCGGAGGCG ACGGGCTCTC
23281 GCGGTTCGGC GGGCGGCTGG CAGAGCCCCT TCCGCGTTCG GGGGTGCGCT CCTGGCGGCG
23341 CTGCTCTGAC TGACTTCCTC CGCGGCCGGC CATTGTGTTC TCCTAGGGAG CAACAACAAG
23401 CATGGAGACT CAGCCATCGT CGCCAACATC GCCATCTGCC CCCGCCGCCA CCGCCGACGA
23461 GAACCAGCAG CAGAATGAAA GCTTAACCGC CCCGCCGCCC AGCCCCACCT CCGACGCCGC
23521 GGCCCCAGAC ATGCAAGAGA TGGAGGAATC CATCGAGATT GACCTGGGCT ACGTGACGCC
23581 CGCGGAGCAC GAGGAGGAGC TGGCAGCGCG CTTTTCAGCC CCGGAAGAGA ACCACCAAGA
23641 GCAGCCAGAG CAGGAAGCAG AGAACGAGCA GAACCAGGCT GGGCACGAGC ATGGCGACTA
23701 CCTGAGCGGG GCAGAGGACG TGCTCATCAA GCATCTGGCC CGCCAATGCA TCATCGTCAA
23761 GGACGCGCTG CTCGACCGCG CCGAGGTGCC CCTCAGCGTG GCGGAGCTCA GCCGCGCCTA
23821 CGAGCGCAAC CTCTTCTCGC CGCGCGTGCC CCCCAAGCGC CAGCCCAACG GCACCTGTGA
23881 GCCCAACCCG CGCCTCAACT TCTACCCGGT CTTCGCGGTG CCCGAGGCCC TGGCCACCTA
23941 CCACCTCTTT TTCAAGAACC AAAGGATCCC CGTCTCCTGC CGCGCCAACC GCACCCGCGC
24001 CGACGCCCTG CTCAACCTGG GCCCCGGCGC CCGCCTACCT GATATCACCT CCTTGGAAGA
24061 GGTTCCCAAG ATCTTCGAGG GTCTGGGCAG CGACGAGACT CGGGCCGCGA ACGCTCTGCA
24121 AGGAAGCGGA GAGGAGCATG AGCACCACAG CGCCCTGGTG GAGTTGGAAG GCGACAACGC
24181 GCGCCTGGCG GTCCTCAAGC GCACGGTCGA GCTGACCCAC TTCGCCTACC CGGCGCTCAA
24241 CCTGCCCCCC AAGGTCATGA GCGCCGTCAT GGACCAGGTG CTCATCAAGC GCGCCTCGCC
24301 CCTCTCGGAG GAGGAGATGC AGGACCCCGA GAGTTCGGAC GAGGGCAAGC CCGTGGTCAG
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FIG. 7G

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24361 CGACGAGCAG CTGGCGCGCT GGCTGGGAGC GAGTANCACC CCCCAGAGCC TGGAAGAGCG
24421 GCGCAAGCTC ATGATGGCCG TGGTCCTGGT GACCGTGGAG CTGGAGTGTC TGCGCCGCTT
24481 CTTTGCCGAC GCGGAGACCC TGCGCAAGGT CGAGGAGAAC CTGCACTACC TCTTCAGGCA
24541 CGGGTTCGTG CGCCAGGCCT GCAAGATCTC CAACGTGGAG CTGACCAACC TGGTCTCCTA
24601 CATGGGCATC CTGCACGAGA ACCGCCTGGG GCAAAACGTG CTGCACACCA CCCTGCGCGG
24661 GGAGGCCCGC CGCGACTACA TCCGCGACTG CGTCTACCTG TACCTCTGCC ACACCTGGCA
24721 GACGGGCATG GGCGTGTGGC AGCAGTGCCT GGAGGAGCAG AACCTGAAAG AGCTCTGCAA
24781 GCTCCTGCAG AAGAACCTCA AGGCCCTGTG GACCGGGTTC GACGAGCGTA CCACCGCCTC
24841 GGACCTGGCC GACCTCATCT TCCCCGAGCG CCTGCGGCTG ACGCTGCGCA ACGGGCTGCC
24901 CGACTTTATG AGCCAAAGCA TGTTGCAAAA CTTTCGCTCT TTCATCCTCG AACGCTCCGG
24961 GATCCTGCCC GCCACCTGCT CCGCGCTGCC CTCGGACTTC GTGCCGCTGA CCTTCCGCGA
25021 GTGCCCCCCG CCGCTCTGGA GCCACTGCTA CTTGCTGCGC CTGGCCAACT ACCTGGCCTA
25081 CCACTCGGAC GTGATCGAGG ACGTCAGCGG CGAGGGTCTG CTGGAGTGCC ACTGCCGCTG
25141 CAACCTCTGC ACGCCGCACC GCTCCCTGGC CTGCAACCCC CAGCTGCTGA GCGAGACCCA
25201 GATCATCGGC ACCTTCGAGT TGCAAGGCCC CGGCGACGGC GAGGGCAAGG GGGGTCTGAA
25261 ACTCACCCCG GGGCTGTGGA CCTCGGCCTA CTTGCGCAAG TTCGTGCCCG AGGACTACCA
25321 TCCCTTCGAG ATCAGGTTCT ACGAGGACCA ATCCCAGCCG CCCAAGGCCG AGCTGTCGGC
25381 CTGCGTCATC ACCCAGGGGG CCATCCTGGC CCAATTGCAA GCCATCCAGA AATCCCGCCA
25441 AGAATTTCTG CTGAAAAAGG GCCACGGGGT CTACTTGGAC CCCCAGACCG GAGAGGAGCT
25501 CAACCCCAGC TTCCCCCAGG ATGCCCCGAG GAAGCAGCAA GAAGCTGAAA GTGGAGCTGC
25561 CGCCGCCGGA GGATTTGGAG GAAGACTGGG AGAGCAGTCA GGCAGAGGAG GAGGAGATGG
25621 AAGACTGGGA CAGCACTCAG GCAGAGGAGG ACAGCCTGCA AGACAGTCTG GAGGAGGAAG
25681 ACGAGGTGGA GGAGGCAGAG GAAGAAGCAG CCGCCGCCAG ACCGTCGTCC TCGGCGGAGA
25741 AAGCAAGCAG CACGGATACC ATCTCCGCTC CGGGTCGGGG TCGCGGCGGC CGGGCCCACA
25801 GTAGGTGGGA CGAGACCGGG CGCTTCCGAA CCCCACCACC CAGACCGGTA AGAAGGAGCG
25861 GCAGGGATAC AAGTCCTGGC GGGGGCACAA AAACGCCATC GTCTCCTGCT TGCAAGCCTG
25921 CGGGGGCAAC ATCTCCTTCA CCCGGCGCTA CCTGCTCTTT CACCGCGGGG TGAACTTCCC
25981 CCGCAACATC TTGCATTACT ACCGTCACCT CCACAGCCCC TACTACTGTT TCCAAGAAGA
26041 GGCAGAAACC CAGCAGCAGC AGAAAACCAG CGGCAGCAGC AGCTAGAAAA TCCACAGCGG
26101 CGGCAGGTGG ACTGAGGATC GCGGCGAACG AGCCGGCGCA GACCCGGGAG CTGAGGAACC
26161 GGATCTTTCC CACCCTCTAT GCCATCTTCC AGCAGAGTCG GGGGCAGGAG CAGGAACTGA
26221 AAGTCAAGAA CCGTTCTCTG CGCTCGCTCA CCCGCAGTTG TCTGTATCAC AAGAGCGAAG
26281 ACCAACTTCA GCGCACTCTC GAGGACGCCG AGGCTCTCTT CAACAAGTAC TGCGCGCTCA
26341 CTCTTAAAGA GTAGCCCGCG CCCGCCCACA CACGGAAAAA GGCGGGAATT ACGTCACCAC
26401 CTGCGCCCTT CGCCCGACCA TCATGAGCAA AGAGATTCCC ACGCCTTACA TGTGGAGCTA
26461 CCAGCCCCAG ATGGGCCTGG CCGCCGGCGC CGCCCAGGAC TACTCCACCC GCATGAACTG
26521 GCTCAGTGCC GGGCCCGCGA TGATCTCACG GGTGAATGAC ATCCGCGCCC ACCGAAACCA
26581 GATACTCCTA GAACAGTCAG CGATCACCGC CACGCCCCGC CATCACCTTA ATCCGCGTAA
26641 TTGGCCCGCC GCCCTGGTGT ACCAGGAAAT TCCCCAGCCC ACGACCGTAC TACTTCCGCG
26701 AGACGCCCAG GCCGAAGTCC AGCTGACTAA CTCAGGTGTC CAGCTGGCCG GCGGCGCCGC
26761 CCTGTGTCGT CACCGCCCCG CTCAGGGTAT AAAGCGGCTG GTGATCCGAG GCAGAGGCAC
26821 ACAGCTCAAC GACGAGGTGG TGAGCTCTTC GCTGGGTCTG CGACCTGACG GAGTCTTCCA
26881 ACTCGCCGGA TCGGGGAGAT CTTCCTTCAC GCCTCGTCAG GCCGTCCTGA CTTTGGAGAG
26941 TTCGTCCTCG CAGCCCCGCT CGGGCGGCAT CGGCACTCTC CAGTTCGTGG AGGAGTTCAC
27001 TCCCTCGGTN TACTTCAACC CCTTCTCCGG CTCCCCCGGC CACTACCCGG ACGAGTTCAT
27061 CCCGAACTTC GACGCCATCA GCGAGTCGGT GGACGGCTAC GATTGAATGT CCCATGGTGG
27121 CGCAGCTGAC CTAGCTCGGC TTCGACACCT GGACCACTGC CGCCGCTTCC GCTGCTTCGC
27181 TCGGGATCTC GCCGAGTTTG CCTACTTTGA GCTGCCCGAG GAGCACCCTC AGGGCCCAGC
27241 CCACGGAGTG CGGATCATCG TCGAAGGGGG CCTCGACTCC CACCTGCTTC GGATCTTCAG
27301 CCAGCGACCG ATCCTGGTCG AGCGCGAACA AGGACAGACC CTTCTTACTT TGTACTGCAT
27361 CTGCAACCAC CCCGGCCTGC ATGAAAGTCT TTGTTGTCTG CTGTGTACTG AGTATAATAA
27421 AAGCTGAGAT CAGCGACTAC TCCGGACTCG ATTGTGGTGT TCCTGCTATC AACCGGTCCC
27481 TGTTCTTCAC CGGGAACGAG ACCGAGCTCC AGCTCCAGTG TAAGCCCCAC AAGAAGTACC
27541 TCACCTGGCT GTTCCAGGGC TCCCCGATCG CCGTTGTCAA CCACTGCGAC AACGACGGAG
27601 TCCTGCTGAG CGGCCCTGCC AACCTTACTT TTTCCACCCG CAGAAGCAAG CTCCAGCTCT
27661 TCCAACCCTT CCTCCCCGGG ACCTATCAGT GCGTCTCAGG ACCCTGCCAT CACACCTTCC
27721 ACCTGATCCC GAATACCACA GCGCCGCTCC CCGCTACTAA CAACCAAACT ACCCACCAAC
27781 GCCACCGTCG CGACCTTTCC TCTGAATCTA ATACCACTAC CGGAGGTGAG CTCCGAGGTC
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FIG. 7H

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27841 GACCAACCTC TGGGATTTAC TACGGCCCCT GGGAGGTGGT GGGGTTAATA GCGCTAGGCC
27901 TAGTTGCGGG TGGGCTTTTG GTTCTCTGCT ACCTATACCT CCCTTGCTGT TCGTACTTAG
27961 TGGTGCTGTG TTGCTGGTTT AAGAAATGGG GAAGATCACC CTAGTGAGCT GCGGTGCGCT
28021 GGTGGCGGTG TTGCTTTCGA TTGTGGGACT GGGCGGCGCG GCTGTAGTGA AGGAGAAGGC
28081 CGATCCCTGC TTGCATTTCA ATCCCAACAA ATGCCAGCTG AGTTTTCAGC CCGATGGCAA
28141 TCGGTGCGCG GTACTGATCA AGTGCGGATG GGAATGCGAG AACGTGAGAA TCGAGTACAA
28201 TAACAAGACT CGGAACAATA CTCTCGCGTC CGTGTGGCAG CCCGGGGACC CCGAGTGGTA
28261 CACCGTCTCT GTCCCCGGTG CTGACGGCTC CCCGCGCACC GTGAATAATA CTTTCATTTT
28321 TGCGCACATG TGCAACACGG TCATGTGGAT GAGCAAGCAG TACGATATGT GGCCCCCCAC
28381 GAAGGAGAAC ATCGTGGTCT TCTCCATCGC TTACAGCCTG TGCACGGCGC TAATCACCGC
28441 TATCGTGTGC CTGAGCATTC ACATGCTCAT CGCTATTCGC CCCAGAAATA ATGCCGAGAA
28501 AGAGAAACAG CCATAACACG TTTTTTCACA CACCTTGTTT TTACAGACAA TGCGTCTGTT
28561 AAATTTTTTA AACATTGTGC TCAGTATTGC TTATGCCTCT GGTTATGCAA ACATACAGAA
28621 AACCCTTTAT GTAGGATCTG ATGGTACACT AGAGNGTACC CAATCACAAG CCAAGGTTGC
28681 ATGGTATTTT TATAGAACCA ACACTGATCC AGTTAAACTT TGTAAGGGTG AATTGCCGCG
28741 TACACATAAA ACTCCACTTA CATTTAGTTG CAGCAATAAT AATCTTACAC TTTTTTCAAT
28801 TACAAAACAA TATACTGGTA CTTATTACAG TACAAACTTT CATACAGGAC AAGATAAATA
28861 TTATACTGTT AAGGTAGAAA ATCCTACCAC TCCTAGAACT ACCACCACCA CCACTACTGC
28921 AAAGCCCACT GTGAAAACTA CAACTAGGAC CACCACAACT ACAGAAACCA CCACCAGCAC
28981 AACACTTGCT GCAACTACAC ACACACACAC TAAGCTAACC TTACAGACCA CTAATGATTT
29041 GATCGCCCTG CTGCAAAAGG GGGATAACAG CACCACTTCC AATGAGGAGA TACCCAAATC
29101 CATGATTGGC ATTATTGTTG CTGTAGTGGT GTGCATGTTG ATCATCGCCT TGTGCATGGT
29161 GTACTATGCC TTCTGCTACA GAAAGCACAG ACTGAACGAC AAGCTGGAAC ACTTACTAAG
29221 TGTTGAATTT TAATTTTTTA GAACCATGAA GATCCTAGGC CTTTTTAGTT TTTCTATCAT
29281 TACCTCTGCT CTTTGTGAAT CAGTGGATAG AGATGTTACT ATTACCACTG GTTCTAATTA
29341 TACACTGAAA GGGCCACCCT CAGGTATGCT TTCGTGGTAT TGCTATTTTG GAACTGACAC
29401 TGATCAAACT GAATTATGCA ATTTTCAAAA AGGCAAAACC TCAAACTCTA AAATCTCTAA
29461 TTATCAATGC AATGGCACTG ATCTGATACT ACTCAATGTC ACGAAAGCAT ATGGTGGCAG
29521 TTATTATTGC CCTGGACAAA ACACTGAAGA AATGATTTTT TACAAAGTGG AAGTGGTTGA
29581 TCCCACTACA CCACCCACCA CCACAACTAT TCATACCACA CACACAGAAC AAACACCAGA
29641 GGCAACAGAA GCAGAGTTGG CCTTCCAGGT TCACGGAGAT TCCTTTGCTG TCAATACCCC
29701 TACACCCGAT CAGCGGTGTC CGGGGCCGCT AGTCAGCGGC ATTGTCGGTG TGCTTTCGGG
29761 ATTAGCAGTC ATAATCATCT GCATGTTCAT TTTTGCTTGC TGCTATAGAA GGCTTTACCG
29821 ACAAAAATCA GACCCACTGC TGAACCTCTA TGTTTAATTT TTTCCAGAGC CATGAAGGCA
29881 GTTAGCGCTC TAGTTTTTTG TTCTTTGATT GGCATTGTTT TTAATAGTAA AATTACCAGA
29941 GTTAGCTTTA TTAAACATGT TAATGTAACT GAAGGAGATA ACATCACACT AGCAGGTGTA
30001 GAAGGTGCTC AAAACACCAC CTGGACAAAA TACCATCTAG GATGGAGAGA TATTTGCACC
30061 TGGAATGTAA CTTATTATTG CATAGGAGTT AATCTTACCA TTGTTAACGC TAACCAATCT
30121 CAGAATGGGT TAATTAAAGG ACAGAGTGTT AGTGTGACCA GTGATGGGTA CTATACCCAG
30181 CATAGTTTTA ACTACAACAT TACTGTCATA CCACTGCCTA CGCCTAGCCC ACCTAGCACT
30241 ACCACACAGA CAACCACATA CAGTACATCA AATCAGCCTA CCACCACTAC AGCAGCAGAG
30301 GTTGCCAGCT CGTCTGGGGT CCGAGTGGCA TTTTTGATGT TGGCCCCATC TAGCAGTCCC
30361 ACTGCTAGTA CCAATGAGCA GACTACTGAA TTTTTGTCCA CTGTCGAGAG CCACACCACA
30421 GCTACCTCCA GTGCCTTCTC TAGCACCGCC AATCTCTCCT CGCTTTCCTC TACACCAATC
30481 AGCCCCGCTA CTACTCCTAG CCCCGCTCCT CTTCCCACTC CCCTGAAGCA AACAGACGGC
30541 GGCATGCAAT GGCAGATCAC CCTGCTCATT GTGATCGGGT TGGTCATCCT GGCCGTGTTG
30601 CTCTACTACA TCTTCTGCCG CCGCATTCCC AACGCGCACC GCAAGCCGGC CTACAAGCCC
30661 ATCGTTATCG GGCAGCCGGA GCCGCTTCAG GTGGAAGGGG GTCTAAGGAA TCTTCTCTTC
30721 TCTTTTACAG TATGGTGATT GAANTATGAT TCCTAGACAA TTCTTGATCA CTATTCTTAT
30781 CTGCCTCCTC CAAGTCTGTG CCACCCTCGC TCTGGTGGCC AACGCCAGTC CAGACTGTAT
30841 TGGGCCCTTC GCCTCCTACG TGCTCTTTGC CTTCGTCACC TGCATCTGCT GCTGTAGCAT
30901 AGTCTGCCTG CTTATCACCT TCTTCCAGTT CATTGACTGG ATCTTTGTGC GCATCGCCTA
30961 CCTGCGCCAC CACCCCCAGT ACCGCGACCA GCGAGTGGCG CAGCTGCTCA GGCTCCTCTG
31021 ATAAGCATGC GGGCTCTGCT ACTTNTCGCG CTTCTGCTGT TAGTGCTCCC CCGTCCCGTC
31081 GACCCCCGGT CCCCCACTCA GTCCCCCGAG GAGGTTCGCA AATGCAAATT CCAAGAACCC
31141 TGGAAATTCC TCAAATGCTA CCGCCAAAAA TCAGACATGC ATCCCAGCTG GATCATGATC
31201 ATTGGGATCG TGAACATTCT GGCCTGCACC CTCATCTCCT TTGTGATTTA CCCCTGCTTT
31261 GACTTTGGTT GGAACTCGCC AGAGGCGCTC TATCTCCCGC CTGAACCTGA CACACCACCA
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FIG. 7I

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31321 CAGCATCAAC CTCAGGCACA CGCACTACCA CCACCACAGC CTAGGCCACA ATACATGCCC
31381 ATATTAGACT ATGAGGCCGA GCCACAGCGA CCCATGCTCC CCGCTATTAG TTACTTCAAT
31441 CTAACCGGCG GAGATGACTG ACCCACTGGC CAATAACAAC GTCAACGACC TTCTCCTGGA
31501 CATGGACGGC CGCGCCTCGG AGCAGCGACT CGCCCAACTT CGCATTCGTC AGCAGCAGGA
31561 GAGAGCCGTC AAGGAGCTGC AGGACGGCAT AGCCATCCAC CAGTGCAAGA GAGGCATCTT
31621 CTGCCTGGTG AAACAGGCCA AGATCTCCTA CGAGGTCACC CAGACCGACC ATCGCCTCTC
31681 CTACGAGCTC CTGCAGCAGC GCCAGAAGTT CACCTGCCTG GTCGGAGTCA ACCCCATCGT
31741 CATCACCCAG CCAGCAGTCG GGCGATACCA AGGGGTGCAT CCACTGCTCC TGCGACTCCC
31801 CCGACTGCGT CCACACTCTG ATCAAGACCC TCTGCGGCCT CCGCGACCTC CTCCCCATGA
31861 ACTAATCACC CCCTTATCCA GTGAAATAAA GATCATATTG ATGATGATTT AAATAAAAAA
31921 AATAATCATT TGATTTGAAA TAAAGATACA ATCATATTGA TGATTTGAGT TTAACAAAAA
31981 TAAAGAATCA CTTACTTGAA ATCTGATACC AGGTCTCTGT CCATGTTTTC TGCCAACACC
32041 ACCTCACTCC CCTCTTCCCA GCTCTGGTAC TGCAGGCCCC GGCGGGCTGC AAACTTCCTC
32101 CACACGCTGA AGGGGATGTC AAATTCCTCC TGTCCCTCAA TCTTCATTTT ATCTTCTATC
32161 AGATGTCCAA AAAGCGCGTC CGGGTGGATG ATGACTTCGA CCCCGTCTAC CCCTACGATG
32221 CAGACAACGC ACCGACCGTG CCCTTCATCA ACCCCCCCTT CGTCTCTTCA GATGGATTCC
32281 AAGAGAAGCC CCTGGGGGTG TTGTCCCTGC GACTGGCTGA CCCCGTCACC ACCAAGAACG
32341 GGGAAATCAC CCTCAAGCTG GGAGAGGGGG TGGACCTCGA CTCGTCGGGA AAACTCATCT
32401 CCAACACGGC CACCAAGGCC GCCGCCCCTC TCAGTATTTC AAACAACACC ATTTCCCTTA
32461 AAACTGCTGC CCCTTTCTAC AACAACAATG GAACTTTAAG CCTCAATGTC TCCACACCAT
32521 TAGCAGTATT TCCCACATTT AACACTTTAG GCATAAGTCT TGGAAACGGT CTTCAGACTT
32581 CAAATAAGTT GTTGACTGTA CAACTAACTC ATCCTCTTAC ATTCAGCTCA AATAGCATCA
32641 CAGTAAAAAC AGACAAAGGG CTATATATTA ACTCCAGTGG AAACAGAGGA CTTGAGGCTA
32701 ATATAAGCCT AAAAAGAGGA CTAGTTTTTG ACGGTAATGC TATTGCAACA TATATTGGAA
32761 ATGGCTTAGA CTATGGATCT TATGATAGTG ATGGAAAAAC AAGACCCGTA ATTACCAAAA
32821 TTGGAGCAGG ATTAAATTTT GATGCTAACA AAGCAATAGC TGTCAAACTA GGCACAGGTT
32881 TAAGTTTTGA CTCCGCTGGT GCCTTGACAG CTGGAAACAA ACAGGATGAC AAGCTAACAC
32941 TTTGGACTAC CCCTGACCCA AGCCCTAATT GTCAATTACT TTCAGACAGA GATGCCAAAT
33001 TTACTCTCTG TCTTACAAAA TGCGGTAGTC AAATACTAGG CACTGTGGCA GTGGCGGCTG
33061 TTACTGTAGG ATCAGCACTA AATCCAATTA ATGACACAGT CAAAAGCGCC ATAGTTTTCC
33121 TTAGATTTGA TTCCGATGGT GTACTCATGT CAAACTCATC AATGGTAGGT GATTACTGGA
33181 ACTTTAGGGA GGGACAGACC ACTCAAAGTG TAGCCTATAC AAATGCTGTG GGATTCATGC
33241 CAAATATAGG TGCATATCCA AAAACCCAAA GTAAAACACC TAAAAATAGC ATAGTCAGTC
33301 AGGTATATTT AACTGGAGAA ACTACTATGC CAATGACACT AACCATAACT TTCAATGGCA
33361 CTGATGAAAA AGACACAACC CCAGTTAGCA CCTACTCTAT GACTTTTACA TGGCAGTGGA
33421 CTGGAGACTA TAAGGACAAA AATATTACCT TTGCTACCAA CTCATTCTCT TTTTCCTACA
33481 TCGCCCAGGA ATAATCCCAC CCAGCAAGCC AACCCCTTTT CCCACCACCT TTGTCTATAT
33541 GGAAACTCTG AAACAGAAAA ATAAAGTTCA AGTGTTTTAT TGAATCAACA GTTTTACAGG
33601 ACTCGAGCAG TTATTTTTCC TCCACCCTCC CAGGACATGG AATACACCAC CCTCTCCCCC
33661 CGCACAGCCT TGAACATCTG AATGCCATTG GTGATGGACA TGCTTTTGGT CTCCACGTTC
33721 CACACAGTTT CAGAGCGAGC CAGTCTCGGA TCGGTCAGGG AGATGAAACC CTCCGGGCAC
33781 TCCCGCATCT GCACCTCACA GCTCAACAGC TGAGGATTGT CCTCGGTGGT CGGGATCACG
33841 GTTATCTGGA AGAAGCAGAA GAGCGGCGGT GGGAATCATA GTCCGCGAAC GGGATCGGCC
33901 GGTGGTGTCG CATCAGGCCC CGCAGCAGTC GCTGCCGCCG CCGCTCCGTC AAGCTGCTGC
33961 TCAGGGGGTT CGGGTCCAGG GACTCCCTCA GCATGATGCC CACGGCCCTC AGCATCAGTC
34021 GTCTGGTGCG GCGGGCGCAG CAGCGCATGC GAATCTCGCT CAGGTCACTG CAGTACGTGC
34081 AACACAGGAC CACCAGGTTG TTCAACAGTC CATAGTTCAA CACGCTCCAG CCGAAACTCA
34141 TCGCGGGAAG GATGCTACCC ACGTGGCCGT CGTACCAGAT CCTCAGGTAA ATCAAGTGGC
34201 GCTCCCTCCA GAAGACGCTG CCCATGTACA TGATCTCCTT GGGCATGTGG CGGTTCACCA
34261 CCTCCCGGTA CCACATCACC CTCTGGTTGA ACATGCAGCC CCGGATGATC CTGCGGAACC
34321 ACAGGGCCAG CACCGCCCCG CCCGCCATGC AGCGAAGAGA CCCCGGATCC CGGCAATGAC
34381 AATGGAGGAC CCACCGCTCG TACCCGTGGA TCATCTGGGA GCTGAACAAG TCTATGTTGG
34441 CACAGCACAG GCATATGCTC ATGCATCTCT TCAGCACTCT CAGCTCCTCG GGGGTCAAAA
34501 CCATATCCCA GGGCACGGGG AACTCTTGCA GGACAGCGAA CCCCGCAGAA CAGGGCAATC
34561 CTCGCACATA ACTTACATTG TGCATGGACA GGGTATCGCA ATCAGGCAGC ACCGGGTGAT
34621 CCTCCACCAG AGAAGCGCGG GTCTCGGTCT CCTCACAGCG TGGTAAGGGG GCCGGCCGAT
34681 ACGGGTGATG GCGGGACGCG GCTGATCGTG TTCTCGACCG TGTCATGATG CAGTTGCTTT
34741 CGGACATTTT CGTACTTGCT GTAGCAGAAC CTGGTCCGGG CGCTGCACAC CGATCGCCGG
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FIG. 7J

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34801 CGGCGGTCTC GGCGCTTGGA ACGCTCGGTG TTAAAGTTGT AAAACAGCCA CTCTCTCAGA
34861 CCGTGCAGCA GATCTAGGGC CTCAGGAGTG ATGAAGATCC CATCATGCCT GATAGCTCTG
34921 ATCACATCGA CCACCGTGGA ATGGGCCAGG CCCAGCCAGA TGATGCAATT TTGTTGGGTT
34981 TCGGTGACGG CGGGGGAGGG AAGAACAGGA AGAACCATGA TTAACTTTTA ATCCAAACGG
35041 TCTCGGAGCA CTTCAAAATG AAGGTCACGG AGATGGCACC TCTCGCCCCC GCTGTGTTGG
35101 TGGAAAATAA CAGCCAGGTC AAAGGTGATA CGGTTCTCGA GATGTTCCAC GGTGGCTTCC
35161 AGCAAAGCCT CCACGCGCAC ATCAGAAACA AGACAATAGC GAAAGCGGGA GGGTTCTCTA
35221 ATTCCTCAAC CATCATGTTA CACTCCTGCA CCATCCCCAG ATAATTTTCA TTTTTCCAGC
35281 CTTGAATGAT TCGAACTAGT TCCTGAGGTA AATCCAAGCC AGCCATGATA AAAAGCTCGC
35341 GCAGAGCACC CTCCACCGGC ATTCTTAAGC ACACCCTCAT AATTCCAAGA TATTCTGCTC
35401 CTGGTTCACC TGCAGCAGAT TGACAAGCGG AATATCAAAA TCTCTGCCGC GATCCCTGAG
35461 CTCCTCCCTC AGCAATAACT GTAAGTACTC TTTCATATCG TCTCCGAAAT TTTTAGCCAT
35521 AGGACCCCCA GGAATAAGAG AAGGGCAAGC CACATTACAG ATAAACCGAA GTCCCCCCCA
35581 GTGAGCATTG CCAAATGTAA GATTGAAATA AGCATGCTGG CTAGACCCGG TGATATCTTC
35641 CAGATAACTG GACAGAAAAT CGGGTAAGCA ATTTTTAAGA AAATCAACAA AAGAAAAATC
35701 TTCCAGGTGC ACGTTTAGGG CCTCGGGAAC AACGATGGAG TAAGTGCAAG GGGTGCGTTC
35761 CAGCATGGTT AGTTAGCTGA TCTGTAAAAA AACAAAAAAT AAAACATTAA ACCATGCTAG
35821 CCTGGCGAAC AGGTGGGTAA ATCGTTCTCT CCAGCACCAG GCAGGCCACG GGGTCTCCGG
35881 CGCGACCCTC GTAAAAATTG TCGCTATGAT TGAAAACCAT CACAGAGAGA CGTTCCCGGT
35941 GGCCGGCGTG AATGATTCGA GAAGAAGCAT ACACCCCCCG GAACATTGGA GTCCGTGAGT
36001 GAAAAAAAGC GGCCGAGGAA GCAATGAGGC ACTACAACGC TCACTCTCAA GTCCAGCAAA
36061 GCGATGCCAT GCGGATGAAG CACAAAATTT TCAGGTGCGT AAAAAATGTA ATTACTCCCC
36121 TCCTGCACAG GCAGCGAAGC TCCCGATCCC TCCAGATACA CATACAAAGC CTCAGCGTCC
36181 ATAGCTTACC GAGCGGCAGC AGCAGCGGCA CACAACAGGC GCAAGAGTCA GAGAAAAGAC
36241 TGAGCTCTAA CCTGTCCGCC CGCTCTCTGC TCAATATATA GCCCCAGATC TACACTGACG
36301 TAAAGGCCAA AGTCTAAAAA TACCCGCCAA ATAATCACAC ACGCCCAGCA CACGCCCAGA
36361 AACCGGTGAC ACACTCAGAA AAATACGCGC ACTTCCTCAA ACGGCCAAAC TGCCGTCATT
36421 TCCGGGTTCC CACGCTACGT CATCAAAACA CGACTTTCAA ATTCCGTCGA CCGTTAAAAA
36481 CATCACCCGC CCCGCCCCTA ACGGTCGCCG CTCCCGCAGC CAATCACCTT CCTCCCTCCC
36541 CAAATTCAAA CAGCTCATTT GCATATTAAC GCGCACCAAA AGTTTGAGGT ATATTATTGA
36601 TGATGG  (SEQ ID NO: 3)
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FIG. 7K

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   1 CATCATCAAT AATATACCTC AAACTTTTGG TGCGCGTTAA TATGCAAATG AGCTGTTTGA
  61 ATTTGGGGAG GGAGGAAGGT GATTGGCCGA GAGACGGGCG ACCGTTAGGG GCGGGGCGGG
 121 TGACGTTTTG ATGACGTGGC CGTGAGGCGG AGCCGGTTTG CAAGTTCTCG TGGGAAAAGT
 181 GACGTCAAAC GAGGTGTGGT TTGAACACGG AAATACTCAA TTTTCCCGCG CTCTCTGACA
 241 GGAAATGAGG TGTTTCTGGG CGGATGCAAG TGAAAACGGG CCATTTTCGC GCGAAAACTG
 301 AATGAGGAAG TGAAAATCTG AGTAATTTCG CGTTTATGGC AGGGAGGAGT ATTTGCCGAG
 361 GGCCGAGTAG ACTTTGACCG ATTACGTGGG GGTTTCGATT ACCGTATTTT TCACCTAAAT
 421 TTCCGCGTAC GGTGTCAAAG TCCGGTGTTT TTACGTAGGC GTCAGCTGAT CGCCAGGGTA
 481 TTTAAACCTG CGCTCTCTAG TCAAGAGGCC ACTCTTGAGT GCCAGCGAGT AGAGTTTTCT
 541 CCTCCGCGCC GCGAGTCAGA TCTACACTTT GAAAGATGAG GCACCTGAGA GACCTGCCCG
 601 GTAATGTTTT CCTGGCTACT GGGAACGAGA TTCTGGAATT GGTGGTGGAC GCCATGATGG
 661 GTGGCGACCC TCCTGAGCCC CCTACCCCAT TTGAGGCGCC TTCGCTGTAC GATTTGTATG
 721 ATCTGGAGGT GGATGTGCCC GAGAACGACC CCAACGAGGA GGCGGTGAAT GATTTGTTTA
 781 GCGATGCCGC GCTGCTGGCT GCCGAGCAGG CTAATACGGA CTCTGGCTCA GACAGCGATT
 841 CCTCTCTCCA TACCCCGAGA CCCGGCAGAG GTGAGAAAAA GATCCCCGAG CTTAAAGGGG
 901 AAGAGCTCGA CCTGCGCTGC TATGAGGAAT GCTTGCCTCC GAGCGATGAT GAGGAGGACG
 961 AGGAGGCGAT TCGAGCTGCA TCGAACCAGG GAGTGAAAGC TGCGGGCGAA AGCTTTAGCC
1021 TGGACTGTCC TACTCTGCCC GGACACGGCT GTAAGTCTTG TGAATTTCAT CGCATGAATA
1081 CTGGAGATAA GAATGTGATG TGTGCCCTGT GCTATATGAG AGCTTACAAC CATTGTGTTT
1141 ACAGTAAGTG TGATTAACTT TAGTTGGGAA GGCAGAGGGT GACTGGGTGC TGACTGGTTT
1201 ATTTATGTAT ATGTTTTTTT ATGTGTAGGT CCCGTCTCTG ACGTAGATGA GACCCCCACT
1261 TCAGAGTGCA TTTCATCACC CCCAGAAATT GGCGAGGAAC CGCCCGAAGA TATTATTCAT
1321 AGACCAGTTG CAGTGAGAGT CACCGGGCGG AGAGCAGCTG TGGAGAGTTT GGATGACTTG
1381 CTACAGGGTG GGGATGAACC TTTGGACTTG TGTACCCGGA AACGCCCCAG GCACTAAGTG
1441 CCACACATGT GTGTTTACTT AAGGTGATGT CAGTATTTAT AGGGTGTGGA GTGCAATAAA
1501 ATCCGTGTTG ACTTTAAGTG CGTGGTTTAT GACTCAGGGG TGGGGACTGT GGGTATATAA
1561 GCAGGTGCAG ACCTGTGTGG TCAGTTCAGA GCAGGACTCA TGGAGATCTG GACGGTCTTG
1621 GAAGACTTTC ACCAGACTAG ACAGCTGCTA GAGAACTCAT CGGAGGGGGT CTCTTACCTG
1681 TGGAGATTCT GCTTCGGTGG GCCTCTAGCT AAGCTAGTCT ATAGGGCCAA ACAGGATTAT
1741 AAGGATCAAT TTGAGGATAT TTTGAGAGAG TGTCCTGGTA TTTTTGACTC TCTCAACTTG
1801 GGCCATCAGT CTCACTTTAA CCAGAGTATT CTGAGAGCCC TTGACTTTTC TACTCCTGGC
1861 AGAACTACCG CCGCGGTAGC CTTTTTTGCC TTTATCCTTG ACAAATGGAG TCAAGAAACC
1921 CATTTCAGCA GGGATTACCG TCTGGACTGC TTAGCAGTAG CTTTGTGGAG AACATGGAGG
1981 TGCCAGCGCC TGAATGCAAT CTCCGGCTAC TTGCCAGTAC AGCCGGTAGA CACGCTGAGG
2041 ATCCTGAGTC TCCAGTCACC CCAGGAACAC CAACGCCGCC AGCAGCCGCA GCAGGAGCAG
2101 CAGCAAGAGG AGGAGGAGGA TCGAGAAGAG AACCCGAGAG CCGGTCTGGA CCCTCCGGTG
2161 GCGGAGGAGG AGGAGTAGCT GACTTGTTTC CCGAGCTGCG CCGGGTGCTG ACTAGGTCTT
2221 CCAGTGGACG GGAGAGGGGG ATTAAGCGGG AGAGGCATGA GGAGACTAGC CACAGAACTG
2281 AACTGACTGT CAGTCTGATG AGCCGCAGGC GCCCAGAATC GGTGTGGTGG CATGAGGTTC
2341 AGTCGCAGGG GATAGATGAG GTCTCGGTGA TGCATGAGAA ATATTCCCTG GAACAAGTCA
2401 AGACTTGTTG GTTGGAGCCT GAGGATGATT GGGAGGTAGC CATCAGGAAT TATGCCAAGC
2461 TGGCTCTGAA GCCAGACAAG AAGTACAAGA TTACCAAACT GATTAATATC AGAAATTCCT
2521 GCTACATTTC AGGGAATGGG GCCGAGGTGG AGATCAGTAC CCAGGAGAGG GTGGCCTTCA
2581 GATGTTGTAT GATGAATATG TACCCGGGGG TGGTGGGCAT GGAGGGAGTC ACCTTTATGA
2641 ACGCGAGGTT CAGGGGTGAT GGGTATAATG GGGTGGTCTT TATGGCCAAC ACCAAGCTGA
2701 CAGTGCACGG ATGCTCCTTC TTTGGGTTCA ATAACATGTG CATCGAGGCC TGGGGCAGTG
2761 TTTCAGTGAG GGGATGCAGC TTTTCAGCCA ACTGGATGGG GGTCGTGGGC AGAACCAAGA
2821 GCAAGGTGTC AGTGAAGAAA TGCCTGTTCG AGAGGTGCCA CCTGGGGGTG ATGAGCGAGG
2881 GCGAAGCCAA AGTCAAACAC TGCGCCTCTA CTGAGACGGG CTGCTTTGTG CTGATCAAGG
2941 GCAATGCCCA AGTCAAGCAT AACATGATCT GTGGGGCCTC GGATGAGCGC GGCTACCAGA
3001 TGCTGACCTG CGCCGGTGGG AACAGCCATA TGCTGGCCAC CGTGCATGTG ACCTCGCACC
3061 CCCGCAAGAC ATGGCCCGAG TTCGAGCACA ACGTCATGAC CCGATGCAAT GTGCACCTGG
3121 GGTCCCGCCG AGGCATGTTC ATGCCCTACC AGTGCAACAT GCAATTTGTG AAGGTGCTGC
3181 TGGAGCCCGA TGCCATGTCC AGAGTGAGCC TGACGGGGGT GTTTGACATG AATGTGGAGC
3241 TGTGGAAAAT TCTGAGATAT GATGAATCCA AGACCAGGTG CCGGGCCTGC GAATGCGGAG
3301 GCAAGCACGC CAGGCTTCAG CCCGTGTGTG TGGAGGTGAC GGAGGACCTG CGACCCGATC
3361 ATTTGGTGTT GTCCTGCAAC GGGACGGAGT TCGGCTCCAG CGGGGAAGAA TCTGACTAGA
3421 GTGAGTAGTG TTTGGGGGAG GTGGAGGGCT TGTATGAGGG GCAGAATGAC TAAAATCTGT
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FIG. 8A

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3481 GTTTTTCTGT GTGTTGCAGC AGCATGAGCG GAAGCGCCTC CTTTGAGGGA GGGGTATTCA
3541 GCCCTTATCT GACGGGGCGT CTCCCCTCCT GGGCGGGAGT GCGTCAGAAT GTGATGGGAT
3601 CCACGGTGGA CGGCCGGCCC GTGCAGCCCG CGAACTCTTC AACCCTGACC TACGCGACCC
3661 TGAGCTCCTC GTCCGTGGAC GCAGCTGCCG CCGCAGCTGC TGCTTCCGCC GCCAGCGCCG
3721 TGCGCGGAAT GGCCCTGGGC GCCGGCTACT ACAGCTCTCT GGTGGCCAAC TCGACTTCCA
3781 CCAATAATCC CGCCAGCCTG AACGAGGAGA AGCTGCTGCT GCTGATGGCC CAGCTCGAGG
3841 CCCTGACCCA GCGCCTGGGC GAGCTGACCC AGCAGGTGGC TCAGCTGCAG GCGGAGACGC
3901 GGGCCGCGGT TGCCACGGTG AAAACCAAAT AAAAAATGAA TCAATAAATA AACGGAGACG
3961 GTTGTTGATT TTAACACAGA GTCTTGAATC TTTATTTGAT TTTTCGCGCG CGGTAGGCCC
4021 TGGACCACCG GTCTCGATCA TTGAGCACCC GGTGGATTTT TTCCAGGACC CGGTAGAGGT
4081 GGGCTTGGAT GTTGAGGTAC ATGGGCATGA GCCCGTCCCG GGGGTGGAGG TAGCTCCATT
4141 GCAGGGCCTC GTGCTCGGGG GTGGTGTTGT AAATCACCCA GTCATAGCAG GGGCGCAGGG
4201 CGTGGTGCTG CACGATGTCC TTGAGGAGGA GACTGATGGC CACGGGCAGC CCCTTGGTGT
4261 AGGTGTTGAC GAACCTGTTG AGCTGGGAGG GATGCATGCG GGGGGAGATG AGATGCATCT
4321 TGGCCTGGAT CTTGAGATTG GCGATGTTCC CGCCCAGATC CCGCCGGGGG TTCATGTTGT
4381 GCAGGACCAC CAGCACGGTG TATCCGGTGC ACTTGGGGAA TTTGTCATGC AACTTGGAAG
4441 GGAAGGCGTG AAAGAATTTG GAGACGCCCT TGTGACCGCC CAGGTTTTCC ATGCACTCAT
4501 CCATGATGAT GGCGATGGGC CCGTGGGCGG CGGCCTGGGC AAAGACGTTT CGGGGGTCGG
4561 ACACATCGTA GTTGTGGTCC TGGGTGAGCT CGTCATAGGC CATTTTAATG AATTTGGGGC
4621 GGAGGGTGCC CGACTGGGGG ACGAAGGTGC CCTCGATCCC GGGGGCGTAG TTGCCCTCGC
4681 AGATCTGCAT CTCCCAGGCC TTGAGCTCGG AGGGGGGGAT CATGTCCACC TGCGGGGCGA
4741 TGAAAAAAAC GGTTTCCGGG GCGGGGGAGA TGAGCTGGGC CGAAAGCAGG TTCCGGAGCA
4801 GCTGGGACTT GCCGCAGCCG GTGGGGCCGT AGATGACCCC GATGACCGGC TGCAGGTGGT
4861 AGTTGAGGGA GAGACAGCTG CCGTCCTCGC GGAGGAGGGG GGCCACCTCG TTCATCATCT
4921 CGCGCACATG CATGTTCTCG CGCACGAGTT CCGCCAGGAG GCGCTCGCCC CCCAGCGAGA
4981 GGAGCTCTTG CAGCGAGGCG AAGTTTTTCA GCGGCTTGAG CCCGTCGGCC ATGGGCATTT
5041 TGGAGAGGGT CTGTTGCAAG AGTTCCAGAC GGTCCCAGAG CTCGGTGATG TGCTCTAGGG
5101 CATCTCGATC CAGCAGACCT CCTCGTTTCG CGGGTTGGGG CGACTGCGGG AGTAGGGCAC
5161 CAGGCGATGG GCGTCCAGCG AGGCCAGGGT CCGGTCCTTC CAGGGTCGCA GGGTCCGCGT
5221 CAGCGTGGTC TCCGTCACGG TGAAGGGGTG CGCGCCGGGC TGGGCGCTTG CGAGGGTGCG
5281 CTTCAGGCTC ATCCGGCTGG TCGAGAACCG CTCCCGGTCG GCGCCCTGCG CGTCGGCCAG
5341 GTAGCAATTG AGCATGAGTT CGTAGTTGAG CGCCTCGGCC GCGTGGCCCT TGGCGCGGAG
5401 CTTACCTTTG GAAGTGTGTC CGCAGACGGG ACAGAGGAGG GACTTGAGGG CGTAGAGCTT
5461 GGGGGCGAGG AAGACGGACT CGGGGGCGTA GGCGTCCGCG CCGCAGCTGG CGCAGACGGT
5521 CTCGCACTCC ACGAGCCAGG TGAGGTCGGG CCGGTTGGGG TCAAAAACGA GGTTTCCTCC
5581 GTGCTTTTTG ATGCGTTTCT TACCTCTGGT CTCCATGAGC TCGTGTCCCC GCTGGGTGAC
5641 AAAGAGGCTG TCCGTGTCCC CGTAGACCGA CTTTATGGGC CGGTCCTCGA GCGGGGTGCC
5701 GCGGTCCTCG TCGTAGAGGA ACCCCGCCCA CTCCGAGACG AAGGCCCGGG TCCAGGCCAG
5761 CACGAAGGAG GCCACGTGGG AGGGGTAGCG GTCGTTGTCC ACCAGCGGGT CCACCTTCTC
5821 CAGGGTATGC AAGCACATGT CCCCCTCGTC CACATCCAGG AAGGTGATTG GCTTGTAAGT
5881 GTAGGCCACG TGACCGGGGG TCCCGGCCGG GGGGGTATAA AAGGGGGCGG GCCCCTGCTC
5941 GTCCTCACTG TCTTCCGGAT CGCTGTCCAG GAGCGCCAGC TGTTGGGGTA GGTATTCCCT
6001 CTCGAAGGCT GGCATAACCT CGGCACTCAG GTTGTCAGTT TCTAGAAACG AGGAGGATTT
6061 GATATTGACG GTGCCGTTGG AGACGCCTTT CATGAGCCCC TCGTCCATCT GGTCAGAAAA
6121 GACGATCTTT TTGTTGTCGA GCTTGGTGGC GAAGGAGCCG TAGAGGGCGT TGGAGAGGAG
6181 CTTGGCGATG GAGCGCATGG TCTGGTTCTT TTCCTTGTCG GCGCGCTCCT TGGCGGCGAT
6241 GTTGAGCTGC ACGTACTCGC GCGCCACGCA CTTCCATTCG GGGAAGACGG TGGTGAGCTC
6301 GTCGGGCACG ATTCTGACCC GCCAGCCGCG GTTGTGCAGG GTGATGAGGT CCACGCTGGT
6361 GGCCACCTCG CCGCGCAGGG GCTCGTTGGT CCAGCAGAGG CGCCCGCCCT TGCGCGAGCA
6421 GAAGGGGGGC AGCGGGTCCA GCATGAGCTC GTCGGGGGGG TCGGCGTCCA CGGTGAAGAT
6481 GCCGGGCAGA AGCTCGGGGT CGAAGTAGCT GATGCAGGTG TCCAGATCGT CCAGCGCCGC
6541 TTGCCAGTCG CGCACGGCCA GCGCGCGCTC GTAGGGGCTG AGGGGCGTGC CCCAGGGCAT
6601 GGGGTGCGTG AGCGCGGAGG CGTACATGCC GCAGATGTCG TAGACGTAGA GGGGCTCCTC
6661 GAGGACGCCG ATGTAGGTGG GGTAGCAGCG CCCCCCGCGG ATGCTGGCGC GCACGTAGTC
6721 GTACAGCTCG TGCGAGGGCG CGAGGAGCCC CGTGCCGAGG TTGGAGCGTT GCGGCTTTTC
6781 GGCGCGGTAG ACGATCTGGC GGAAGATGGC GTGGGAGTTG GAGGAGATGG TGGGCCTCTG
6841 GAAGATGTTG AAGTGGGCGT GGGGCAGGCC GACCGAGTCC CTGATGAAGT GGGCGTAGGA
6901 GTCCTGCAGC TTGGCGACGA GCTCGGCGGT GACGAGGACG TCCAGGGCGC AGTAGTCGAG
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FIG. 8B

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 6961 GGTCTCTTGG ATGATGTCGT ACTTGAGCTG GCCCTTCTGC TTCCACAGCT CGCGGTTGAG
 7021 AAGGAACTCT TCGCGGTCCT TCCAGTACTC TTCGAGGGGG AACCCGTCCT GATCGGCACG
 7081 GTAAGAGCCC ACCATGTAGA ACTGGTTGAC GGCCTTGTAG GCGCAGCAGC CCTTCTCCAC
 7141 GGGGAGGGCG TAAGCTTGTG CGGCCTTGCG CAGGGAGGTG TGGGTGAGGG CGAAGGTGTC
 7201 GCGCACCATG ACCTTGAGGA ACTGGTGCTT GAAGTCGAGG TCGTCGCAGC CGCCCTGCTC
 7261 CCAGAGCTGG AAGTCCGTGC GCTTCTTGTA GGCGGGGTTG GGCAAAGCGA AAGTAACATC
 7321 GTTGAAGAGG ATCTTGCCCG CGCGGGGCAT GAAGTTGCGA GTGATGCGGA AAGGCTGGGG
 7381 CACCTCGGCC CGGTTGTTGA TGACCTGGGC GGCGAGGACG ATCTCGTCGA AGCCGTTGAT
 7441 GTTGTGCCCG ACGATGTAGA GTTCCACGAA TCGCGGGCGG CCCTTAACGT GGGGCAGCTT
 7501 CTTGAGCTCG TCGTAGGTGA GCTCGGCGGG GTCGCTGAGC CCGTGCTGCT CGAGGGCCCA
 7561 GTCGGCGACG TGGGGGTTGG CGCTGAGGAA GGAAGTCCAG AGATCCACGG CCAGGGCGGT
 7621 CTGCAAGCGG TCCCGGTACT GACGGAACTG CTGGCCCACG GCCATTTTTT CGGGGGTGAC
 7681 GCAGTAGAAG GTGCGGGGGT CGCCGTGCCA GCGGTCCCAC TTGAGCTGGA GGGCGAGGTC
 7741 GTGGGCGAGC TCGACGAGCG GCGGGTCCCC GGAGAGTTTC ATGACCAGCA TGAAGGGGAC
 7801 GAGCTGCTTG CCGAAGGACC CCATCCAGGT GTAGGTTTCC ACATCGTAGG TGAGGAAGAG
 7861 CCTTTCGGTG CGAGGATGCG AGCCGATGGG GAAGAACTGG ATCTCCTGCC ACCAGTTGGA
 7921 GGAATGGCTG TTGATGTGAT GGAAGTAGAA ATGCCGACGG CGCGCCGAGC ACTCGTGCTT
 7981 GTGTTTATAC AAGCGTCCGC AGTGCTCGCA ACGCTGCACG GGATGCACGT GCTGCACGAG
 8041 CTGTACCTGG GTTCCTTTGA CGAGGAATTT CAGTGGGCAG TGGAGCGCTG GCGGCTGCAT
 8101 CTGGTGCTGT ACTACGTCCT GGCCATCGGC GTGGCCATCG TCTGCCTCGA TGGTGGTCAT
 8161 GCTGACGAGC CCGCGCGGGA GGCAGGTCCA GACTTCGGCT CGGACGGGTC GGAGAGCGAG
 8221 GACGAGGGCG CGCAGGCCGG AGCTGTCCAG GGTCCTGAGA CGCTGCGGAG TCAGGTCAGT
 8281 GGGCAGCGGC GGCGCGCGGT TGACTTGCAG GAGCTTTTCC AGGGCGCGCG GGAGGTCCAG
 8341 ATGGTACTTG ATCTCCACGG CGCCGTTGGT GGCGACGTCC ACGGCTTGCA GGGTCCCGTG
 8401 CCCCTGGGGC GCCACCACCG TGCCCCGTTT CTTCTTGGGC GCTGCTTCCA TGCCGGTCAG
 8461 AAGCGGCGGC GAGGACGCGC GCCGGGCGGC AGGGGCGGCT CGGGACCCGG AGGCAGGGGC
 8521 GGCAGGGGCA CGTCGGCGCC GCGCGCGGGC AGGTTCTGGT ACTGCGCCCG GAGAAGACTG
 8581 GCGTGAGCGA CGACGCGACG GTTGACGTCC TGGATCTGAC GCCTCTGGGT GAAGGCCACG
 8641 GGACCCGTGA GTTTGAACCT GAAAGAGAGT TCGACAGAAT CAATCTCGGT ATCGTTGACG
 8701 GCGGCCTGCC GCAGGATCTC TTGCACGTCG CCCGAGTTGT CCTGGTAGGC GATCTCGGTC
 8761 ATGAACTGCT CGATCTCCTC CTCCTGAAGG TCTCCGCGGC CGGCGCGCTC GACGGTGGCC
 8821 GCGAGGTCGT TGGAGATGCG GCCCATGAGC TGCGAGAAGG CGTTCATGCC GGCCTCGTTC
 8881 CAGACGCGGC TGTAGACCAC GGCTCCGTCG GGGTCGCGCG CGCGCATGAC CACCTGGGCG
 8941 AGGTTGAGCT CGACGTGGCG CGTGAAGACC GCGTAGTTGC AGAGGCGCTG GTAGAGGTAG
 9001 TTGAGCGTGG TGGCGATGTG CTCGGTGACG AAGAAGTACA TGATCCAGCG GCGGAGCGGC
 9061 ATCTCGCTGA CGTCGCCCAG GGCTTCCAAG CGCTCCATGG CCTCGTAGAA GTCCACGGCG
 9121 AAGTTGAAAA ACTGGGAGTT GCGCGCCGAG ACGGTCAACT CCTCCTCCAG AAGACGGATG
 9181 AGCTCAGCGA TGGTGGCGCG CACCTCGCGC TCGAAGGCCC CGGGGGGCTC CTCTTCTTCC
 9241 ATCTCTTCCT CCTCCACTAA CATCTCTTCT ACTTCCTCCT CAGGAGGCGG CGGCGGGGGA
 9301 GGGGCCCTGC GTCGCCGGCG GCGCACGGGC AGACGGTCGA TGAAGCGCTC GATGGTCTCC
 9361 CCGCGCCGGC GACGCATGGT CTCGGTGACG GCGCGCCCGT CCTCGCGGGG CCGCAGCGTG
 9421 AAGACGCCGC CGCGCATCTC CAGGTGGCCG CCGGGGGGGT CTCCGTTGGG CAGGGAGAGG
 9481 GCGCTGACGA TGCATCTTAT CAATTGGCCC GTAGGGACTC CGCGCAAGGA CCTGAGCGTC
 9541 TCGAGATCCA CGGGATCCGA AAACCGCTGA ACGAAGGCTT CGAGCCAGTC GCAGTCGCAA
 9601 GGTAGGCTGA GCCCGGTTTC TTGTTCTTCG GGGATTTCGG GAGGCGGGCG GGCGATGCTG
 9661 CTGGTGATGA AGTTGAAGTA GGCGGTCCTG AGACGGCGGA TGGTGGCGAG GAGCACCAGG
 9721 TCCTTGGGCC CGGCTTGCTG GATGCGCAGA CGGTCGGCCA TGCCCCAGGC GTGGTCCTGA
 9781 CACCTGGCGA GGTCCTTGTA GTAGTCCTGC ATGAGCCGCT CCACGGGCAC CTCCTCCTCG
 9841 CCCGCGCGGC CGTGCATGCG CGTGAGCCCG AACCCGCGCT GGGGCTGGAC GAGCGCCAGG
 9901 TCGGCGACGA CGCGCTCGGC GAGGATGGCC TGCTGTATCT GGGTGAGGGT GGTCTGGAAG
 9961 TCGTCGAAGT CGACGAAGCG GTGGTAGGCT CCGGTGTTGA TGGTATAGGA GCAGTTGGCC
10021 ATGACGGACC AGTTGACGGT CTGGTGGCCG GGTCGCACGA GCTCGTGGTA CTTGAGGCGC
10081 GAGTAGGCGC GCGTGTCGAA GATGTAGTCG TTGCAGGTGC GCACGAGGTA CTGGTATCCG
10141 ACGAGGAAGT GCGGCGGCGG CTGGCGGTAG AGCGGCCATC GCTCGGTGGC GGGGGCGCCG
10201 GGCGCGAGGT CCTCGAGCAT GAGGCGGTGG TAGCCGTAGA TGTACCTGGA CATCCAGGTG
10261 ATGCCGGCGG CGGTGGTGGA GGCGCGCGGG AACTCGCGGA CGCGGTTCCA GATGTTGCGC
10321 AGCGGCAGGA AGTAGTTCAT GGTGGCCGCG GTCTGGCCCG TGAGGCGCGC GCAGTCGTGG
10381 ATGCTCTAGA CATACGGGCA AAAACGAAAG CGGTCAGCGG CTCGACTCCG TGGCCTGGAG
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FIG. 8C

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10441 GCTAAGCGAA CGGGTTGGGC TGCGCGTGTA CCCCGGTTCG AATCTCGAAT CAGGCTGGAG
10501 CCGCAGCTAA CGTGGTACTG GCACTCCCGT CTCGACCCAA GCCTGCTAAC GAAACCTCCA
10561 GGATACGGAG GCGGGTCGTT TTTTGGCCTT GGTCGCTGGT CATGAAAAAC TAGTAAGCGC
10621 GGAAAGCGAC CGCCCGCGAT GGCTCGCTGC CGTAGTCTGG AGAAAGAATC GCCAGGGTTG
10681 CGTTGCGGTG TGCCCCGGTT CGAGCCTCAG CGCTCGGCGC CGGCCGGATT CCGCGGCTAA
10741 CGTGGGCGTG GCTGCCCCGT CGTTTCCAAG ACCCCTTAGC CAGCCGACTT CTCCAGTTAC
10801 GGAGCGAGCC CCTCTTTTTC TTGTGTTTTT GCCAGATGCA TCCCGTACTG CGGCAGATGC
10861 GCCCCCACCC TCCACCTCAA CCGCCCCTAC CGCCGCAGCA GCAGCAACAG CCGGCGCTTC
10921 TGCCCCCGCC CCAGCAGCAG CCAGCCACTA CCGCGGCGGC CGCCGTGAGC GGAGCCGGCG
10981 TTCAGTATGA CCTGGCCTTG GAAGAGGGCG AGGGGCTGGC GCGGCTGGGG GCGTCGTCGC
11041 CGGAGCGGCA CCCGCGCGTG CAGATGAAAA GGGACGCTCG CGAGGCCTAC GTGCCCAAGC
11101 AGAACCTGTT CAGAGACAGG AGCGGCGAGG AGCCCGAGGA GATGCGCGCC TCCCGCTTCC
11161 ACGCGGGGCG GGAGCTGCGG CGCGGCCTGG ACCGAAAGCG GGTGCTGAGG GACGAGGATT
11221 TCGAGGCGGA CGAGCTGACG GGGATCAGCC CCGCGCGCGC GCACGTGGCC GCGGCCAACC
11281 TGGTCACGGC GTACGAGCAG ACCGTGAAGG AGGAGAGCAA CTTCCAAAAA TCCTTCAACA
11341 ACCACGTGCG CACGCTGATC GCGCGCGAGG AGGTGACCCT GGGCCTGATG CACCTGTGGG
11401 ACCTGCTGGA GGCCATCGTG CAGAACCCCA CGAGCAAGCC GCTGACGGCG CAGCTGTTTC
11461 TGGTGGTGCA GCACAGTCGG GACAACGAGA CGTTCAGGGA GGCGCTGCTG AATATCACCG
11521 AGCCCGAGGG CCGCTGGCTC CTGGACCTGG TGAACATTCT GCAGAGCATC GTGGTGCAGG
11581 AGCGCGGGCT GCCGCTGTCC GAGAAGCTGG CGGCTATCAA CTTCTCGGTG CTGAGCCTGG
11641 GCAAGTACTA CGCTAGGAAG ATCTACAAGA CCCCGTACGT GCCCATAGAC AAGGAGGTGA
11701 AGATCGACGG GTTTTACATG CGCATGACCC TGAAAGTGCT GACCCTGAGC GACGATCTGG
11761 GGGTGTACCG CAACGACAGG ATGCACCGCG CGGTGAGCGC CAGCCGCCGG CGCGAGCTGA
11821 GCGACCAGGA GCTGATGCAC AGCCTGCAGC GGGCCCTGAC CGGGGCCGGG ACCGAGGGGG
11881 AGAGCTACTT TGACATGGGC GCGGACCTGC GCTGGCAGCC CAGCCGCCGG GCCTTGGAAG
11941 CTGCCGGCGG TTCCCCCTAC GTGGAGGAGG TGGACGATGA GGAGGAGGAG GGCGAGTACC
12001 TGGAAGACTG ATGGCGCGAC CGTATTTTTG CTAGATGCAG CAACAGCCAC CGCCTCCTGA
12061 TCCCGCGATG CGGGCGGCGC TGCAGAGCCA GCCGTCCGGC ATTAACTCCT CGGACGATTG
12121 GACCCAGGCC ATGCAAACGCA TCATGGCGCT GACGACCCGC AATCCCGAAG CCTTTAGACA
12181 GCAGCCTCAG GCCAACCGGC TCTCGGCCAT CCTGGAGGCC GTGGTGCCCT CGCGCTCGAA
12241 CCCCACGCAC GAGAAGGTGC TGGCCATCGT GAACGCGCTG GTGGAGAACA AGGCCATCCG
12301 CGGCGACGAG GCCGGGCTGG TGTACAACGC GCTGCTGGAG CGCGTGGCCC GCTACAACAG
12361 CACCAACGTG CAGACGAACC TGGACCGCAT GGTGACCGAC GTGCGCGAGG CGGTGTCGCA
12421 GCGCGAGCGG TTCCACCGCG AGTCGAACCT GGGCTCCATG GTGGCGCTGA ACGCCTTCCT
12481 GAGCACGCAG CCCGCCAACG TGCCCCGGGG CCAGGAGGAC TACACCAACT TCATCAGCGC
12541 GCTGCGGCTG ATGGTGGCCG AGGTGCCCCA GAGCGAGGTG TACCAGTCGG GGCCGGACTA
12601 CTTCTTCCAG ACCAGTCGCC AGGGCTTGCA GACCGTGAAC CTGAGCCAGG CTTTCAAGAA
12661 CTTGCAGGGA CTGTGGGGCG TGCAGGCCCC GGTCGGGGAC CGCGCGACGG TGTCGAGCCT
12721 GCTGACGCCG AACTCGCGCC TGCTGCTGCT GCTGGTGGCG CCCTTCACGG ACAGCGGCAG
12781 CGTGAGCCGC GACTCGTACC TGGGCTACCT GCTTAACCTG TACCGCGAGG CCATCGGGCA
12841 GGCGCACGTG GACGAGCAGA CCTACCAGGA GATCACCCAC GTGAGCCGCG CGCTGGGCCA
12901 GGAGGACCCG GGCAACCTGG AGGCCACCCT GAACTTCCTG CTGACCAACC GGTCGCAGAA
12961 GATCCCGCCC CAGTACGCGC TGAGCACCGA GGAGGAGCGC ATCCTGCGCT ACGTGCAGCA
13021 GAGCGTGGGG CTGTTCCTGA TGCAGGAGGG GGCCACGCCC AGCGCCGCGC TCGACATGAC
13081 CGCGCGCAAC ATGGAGCCCA GCATGTACGC TCGCAACCGC CCGTTCATCA ATAAGCTGAT
13141 GGACTACTTG CATCGGGCGG CCGCCATGAA CTCGGACTAC TTTACCAACG CCATCTTGAA
13201 CCCGCACTGG CTCCCGCCGC CCGGGTTCTA CACGGGCGAG TACGACATGC CCGACCCCAA
13261 CGACGGGTTC CTGTGGGACG ACGTGGACAG CAGCGTGTTC TCGCCGCGCC CCGCCACCAC
13321 CGTGTGGAAG AAAGAGGGCG GGGACCGGCG GCCGTCCTCG GCGCTGTCCG GTCGCGCGGG
13381 TGCTGCCGCG GCGGTGCCTG AGGCCGCCAG CCCCTTCCCG AGCCTGCCCT TTTCGCTGAA
13441 CAGCGTGCGC AGCAGCGAGC TGGGTCGGCT GACGCGGCCG CGCCTGCTGG GCGAGGAGGA
13501 GTACCTGAAC GACTCCTTGT TGAGGCCCGA GCGCGAGAAG AACTTCCCCA ATAACGGGAT
13561 AGAGAGCCTG GTGGACAAGA TGAGCCGCTG GAAGACGTAC GCGCACGAGC ACAGGGACGA
13621 GCCCCGAGCT AGCAGCAGCG CAGGCACCCG TAGACGCCAG CGACACGACA GGCAGCGGGG
13681 TCTGGTGTGG GACGATGAGG ATTCCGCCGA CGACAGCAGC GTGTTGGACT TGGGTGGGAG
13741 TGGTGGTGGT AACCCGTTCG CTCACTTGCG CCCCCGTATC GGGCGCCTGA TGTAAGAATC
13801 TGAAAAAATA AAAAACGGTA CTCACCAAGG CCATGGCGAC CAGCGTGCGT TCTTCTCTGT
13861 TGTTTGTAGT AGTATGATGA GGCGCGTGTA CCCGGAGGGT CCTCCTCCCT CGTACGAGAG
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FIG. 8D

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13921 CGTGATGCAG CAGGCGGTGG CGGCGGCGAT GCAGCCCCCG CTGGAGGCGC CTTACGTGCC
13981 CCCGCGGTAC CTGGCGCCTA CGGAGGGGCG GAACAGCATT CGTTACTCGG AGCTGGCACC
14041 CTTGTACGAT ACCACCCGGT TGTACCTGGT GGACAACAAG TCGGCGGACA TCGCCTCGCT
14101 GAACTACCAG AACGACCACA GCAACTTCCT GACCACCGTG GTGCAGAACA ACGATTTCAC
14161 CCCCACGGAG GCCAGCACCC AGACCATCAA CTTTGACGAG CGCTCGCGGT GGGGCGGCCA
14221 GCTGAAAACC ATCATGCACA CCAACATGCC CAACGTGAAC GAGTTCATGT ACAGCAACAA
14281 GTTCAAGGCG CGGGTGATGG TCTCGCGCAA GACCCCCAAT GGGGTCGCGG TGGATGAGAA
14341 TTATGATGGT AGTCAGGACG AGCTGACTTA CGAGTGGGTG GAGTTTGAGC TGCCCGAGGG
14401 CAACTTCTCG GTGACCATGA CCATCGATCT GATGAACAAC GCCATCATCG ACAACTACTT
14461 GGCGGTGGGG CGTCAGAACG GGGTGCTGGA GAGCGACATC GGCGTGAAGT TCGACACGCG
14521 CAACTTCCGG CTGGGCTGGG ACCCCGTGAC CGAGCTGGTG ATGCCGGGCG TGTACACCAA
14581 CGAGGCCTTC CACCCCGACA TCGTCCTGCT GCCCGGCTGC GGCGTGGACT TCACCGAGAG
14641 CCGCCTCAGC AACCTGCTGG GCATCCGCAA GCGGCAGCCC TTCCAGGAGG GCTTCCAGAT
14701 CCTGTACGAG GACCTGGAGG GGGGCAACAT CCCCGCGCTC TTGGATGTCG AAGCCTATGA
14761 GAAAAGCAAG GAGGAGGCCG CCGCAGCGGC GACCGCAGCC GTGGCCACCG CCTCTACCGA
14821 GGTGCGGGGC GATAATTTTG CTAGCGCCGC GGCAGTGGCC GAGGCGGCTG AAACCGAAAG
14881 TAAGATAGTC ATCCAGCCGG TGGAGAAGGA CAGCAAGGAC AGGAGCTACA ACGTGCTCGC
14941 GGACAAGAAA AACACCGCCT ACCGCAGCTG GTACCTGGCC TACAACTACG GCGACCCCGA
15001 GAAGGGCGTG CGCTCCTGGA CGCTGCTCAC CACCTCGGAC GTCACCTGCG GCGTGGAGCA
15061 AGTCTACTGG TCGCTGCCCG ACATGATGCA AGACCCGGTC ACCTTCCGCT CCACGCGTCA
15121 AGTTAGCAAC TACCCGGTGG TGGGCGCCGA GCTCCTGCCC GTCTACTCCA AGAGCTTCTT
15181 CAACGAGCAG GCCGTCTACT CGCAGCAGCT GCGCGCCTTC ACCTCGCTCA CGCACGTCTT
15241 CAACCGCTTC CCCGAGAACC AGATCCTCGT CCGCCCGCCC GCGCCCACCA TTACCACCGT
15301 CAGTGAAAAC GTTCCTGCTC TCACAGATCA CGGGACCCTG CCGCTGCGCA GCAGTATCCG
15361 GGGAGTCCAG CGCGTGACCG TCACTGACGC CAGACGCCGC ACCTGCCCCT ACGTCTACAA
15421 GGCCCTGGGC GTAGTCGCGC CGCGCGTCCT CTCGAGCCGC ACCTTCTAAA AAATGTCCAT
15481 TCTCATCTCG CCCAGTAATA ACACCGGTTG GGGCCTGCGC GCGCCCAGCA AGATGTACGG
15541 AGGCGCTCGC CAACGCTCCA CGCAACACCC CGTGCGCGTG CGCGGGCACT TCCGCGCTCC
15601 CTGGGGCGCC CTCAAGGGCC GCGTGCGCTC GCGCACCACC GTCGACGACG TGATCGACCA
15661 GGTGGTGGCC GACGCGCGCA ACTACACGCC CGCCGCCGCG CCCGCCTCCA CCGTGGACGC
15721 CGTCATCGAC AGCGTGGTGG CCGATGCGCG CCGGTACGCC CGCGCCAAGA GCCGGCGGCG
15781 GCGCATCGCC CGGCGGCACC GGAGCACCCC CGCCATGCGC GCGGCGCGAG CCTTGCTGCG
15841 CAGGGCCAGG CGCACGGGAC GCAGGGCCAT GCTCAGGGCG GCCAGACGCG CGGCCTCCGG
15901 CAGCAGCAGC GCCGGCAGGA CCCGCAGACG CGCGGCCACG GCGGCGGCGG CGGCCATCGC
15961 CAGCATGTCC CGCCCGCGGC GCGGCAACGT GTACTGGGTG CGCGACGCCG CCACCGGTGT
16021 GCGCGTGCCC GTGCGCACCC GCCCCCCTCG CACTTGAAGA TGCTGACTTC GCGATGTTGA
16081 TGTGTCCCAG CGGCGAGGAG GATGTCCAAG CGCAAATACA AGGAAGAGAT GCTCCAGGTC
16141 ATCGCGCCTG AGATCTACGG CCCCGCGGTG AAGGAGGAAA GAAAGCCCCG CAAACTGAAG
16201 CGGGTCAAAA AGGACAAAAA GGAGGAGGAA GATGTGGACG GACTGGTGGA GTTTGTGCGC
16261 GAGTTCGCCC CCCGGCGGCG CGTGCAGTGG CGCGGGCGGA AAGTGAAACC GGTGCTGCGG
16321 CCCGGCACCA CGGTGGTCTT CACGCCCGGC GAGCGTTCCG GCTCCGCCTC CAAGCGCTCC
16381 TACGACGAGG TGTACGGGGA CGAGGACATC CTCGAGCAGG CGGTCGAGCG TCTGGGCGAG
16441 TTTGCTTACG GCAAGCGCAG CCGCCCCGCG CCCTTGAAAG AGGAGGCGGT GTCCATCCCG
16501 CTGGACCACG GCAACCCCAC GCCGAGCCTG AAGCCGGTGA CCCTGCAGCA GGTGCTGCCG
16561 AGCGCGGCGC CGCGCCGGGG CTTCAAGCGC GAGGGCGGCG AGGATCTGTA CCCGACCATG
16621 CAGCTGATGG TGCCCAAGCG CCAGAAGCTG GAGGACGTGC TGGAGCACAT GAAGGTGGAC
16681 CCCGAGGTGC AGCCCGAGGT CAAGGTGCGG CCCATCAAGC AGGTGGCCCC GGGCCTGGGC
16741 GTGCAGACCG TGGACATCAA GATCCCCACG GAGCCCATGG AAACGCAGAC CGAGCCCGTG
16801 AAGCCCAGCA CCAGCACCAT GGAGGTGCAG ACGGATCCCT GGATGCCGGC GCCGGCTTCC
16861 ACCACTCGCC GAAGACGCAA GTACGGCGCG GCCAGCCTGC TGATGCCCAA CTACGCGCTG
16921 CATCCTTCCA TCATCCCCAC GCCGGGCTAC CGCGGCACGC GCTTCTACCG CGGCTACACC
16981 AGCAGCCGCC GCAAGACCAC CACCCGCCGC CGCCGTCGTC GCACCCGCCG CAGCAGCACC
17041 GCGACTTCCG CCGCCGCCCT GGTGCGGAGA GTGTACCGCA GCGGGCGCGA GCCTCTGACC
17101 CTGCCGCGCG CGCGCTACCA CCCGAGCATC GCCATTTAAC TCTGCCGTCG CCTCCTACTT
17161 GCAGATATGG CCCTCACATG CCGCCTCCGC GTCCCCATTA CGGGCTACCG AGGAAGAAAG
17221 CCGCGCCGTA GAAGGCTGAC GGGGAACGGG CTGCGTCGCC ATCACCACCG GCGGCGGCGC
17281 GCCATCAGCA AGCGGTTGGG GGGAGGCTTC CTGCCCGCGC TGATCCCCAT CATCGCCGCG
17341 GCGATCGGGG CGATCCCCGG CATAGCTTCC GTGGCGGTGC AGGCCTCTCA GCGCCACTGA
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FIG. 8E

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17401 GACACAGCTT GGAAAATTTG TAATAAAAAA ATGGACTGAC GCTCCTGGTC CTGTGATGTG
17461 TGTTTTTAGA TGGAAGACAT CAATTTTTCG TCCCTGGCAC CGCGACACGG CACGCGGCCG
17521 TTTATGGGCA CCTGGAGCGA CATCGGCAAC AGCCAACTGA ACGGGGGCGC CTTCAATTGG
17581 AGCAGTCTCT GGAGCGGGCT TAAGAATTTC GGGTCCACGC TCAAAACCTA TGGCAACAAG
17641 GCGTGGAACA GCAGCACAGG GCAGGCGCTG AGGGAAAAGC TGAAAGAGCA GAACTTCCAG
17701 CAGAAGGTGG TCGATGGCCT GGCCTCGGGC ATCAACGGGG TGGTGGACCT GGCCAACCAG
17761 GCCGTGCAGA AACAGATCAA CAGCCGCCTG GACGCGGTCC CGCCCGCGGG GTCCGTGGAG
17821 ATGCCCCAGG TGGAGGAGGA GCTGCCTCCC CTGGACAAGC GCGGCGACAA GCGACCGCGT
17881 CCCGACGCGG AGGAGACGCT GCTGACGCAC ACGGACGAGC CGCCCCCGTA CGAGGAGGCG
17941 GTGAAACTGG GTCTGCCCAC CACGCGGCCC GTGGCGCCTC TGGCCACCGG GGTGCTGAAA
18001 CCCAGCAGCA GCAGCCAGCC CGCGACCCTG GACTTGCCTC CGCCTGCTTC CCGCCCCTCC
18061 ACAGTGGCTA AGCCCCTGCC GCCGGTGGCC GTCGCGTCGC GCGCCCCCCG AGGCCGCCCC
18121 CAGGCGAACT GGCAGAGCAC TCTGAACAGC ATCGTGGGTC TGGGAGTGCA GAGTGTGAAG
18181 CGCCGCCGCT GCTATTAAAA GACACTGTAG CGCTTAACTT GCTTGTCTGT GTGTATATGT
18241 ATGTCCGCCG ACCAGAAGGA GGAAGAGGCG CGTCGCCGAG TTGCAAGATG GCCACCCCAT
18301 CGATGCTGCC CCAGTGGGCG TACATGCACA TCGCCGGACA GGACGCTTCG GAGTACCTGA
18361 GTCCGGGTCT GGTGCAGTTC GCCCGCGCCA CAGACACCTA CTTCAGTCTG GGGAACAAGT
18421 TTAGGAACCC CACGGTGGCG CCCACGCACG ATGTGACCAC CGACCGCAGC CAGCGGCTGA
18481 CGCTGCGCTT CGTGCCCGTG GACCGCGAGG ACAACACCTA CTCGTACAAA GTGCGCTACA
18541 CGCTGGCCGT GGGCGACAAC CGCGTGCTGG ACATGGCCAG CACCTACTTT GACATCCGCG
18601 GCGTGCTGGA TCGGGGGCCC AGCTTCAAAC CCTACTCCGG CACCGCCTAC AACAGCCTGG
18661 CTCCCAAGGG AGCGCCCAAC ACTTGCCAGT GGACATATAA AGCTGGTGAT ACTGATACAG
18721 AAAAAACCTA TACATATGGA AATGCACCTG TGCAAGGCAT TAGCATTACA AAGGATGGTA
18781 TTCAACTTGG AACTGACAGC GATGGTCAGG CAATCTATGC AGACGAAACT TATCAACCAG
18841 AGCCTCAAGT GGGTGATGCT GAATGGCATG ACATCACTGG TACTGATGAA AAATATGGAG
18901 GCAGAGCTCT TAAGCCTGAC ACCAAAATGA AGCCTTGCTA TGGTTCTTTT GCCAAGCCTA
18961 CCAATAAAGA AGGAGGCCAG GCAAATGTGA AAACCGAAAC AGGCGGTACC AAAGAATATG
19021 ACATTGACAT GGCATTCTTC GATAATCGAA GTGCAGCTGC CGCCGGCCTA GCCCCAGAAA
19081 TTGTTTTGTA TACTGAGAAT GTGGATCTGG AAACTCCAGA TACCCATATT GTATACAAGG
19141 CAGGTACAGA TGACAGTAGC TCTTCTATCA ATTTGGGTCA TGCAGTCCATG CCCAACAGAC
19201 CCAACTACAT TGGCTTCAGA GACAACTTTA TCGGTCTGAT GTACTACAAC AGCACTGGCA
19261 ATATGGGTGT ACTGGCTGGA CAGGCCTCCC AGCTGAATGC TGTGGTGGAC TTGCAGGACA
19321 GAAACACCGA ACTGTCCTAC CAGCTCTTGC TTGACTCTCT GGGTGACAGA ACCAGGTATT
19381 TCAGTATGTG GAATCAGGCG GTGGACAGTT ATGACCCCGA TGTGCGCATT ATTGAAAATC
19441 ACGGTGTGGA GGATGAACTT CCTAACTATT GCTTCCCCCT GGATGCTGTG GGTAGAACTG
19501 ATACTTACCA GGGAATTAAG GCCAATGGTG ATAATCAAAC CACCTGGACC AAAGATGATA
19561 CTGTTAATGA TGCTAATGAA TTGGGCAAGG GCAATCCTTT CGCCATGGAG ATCAACATCC
19621 AGGCCAACCT GTGGCGGAAC TTCCTCTACG CGAACGTGGC GCTGTACCTG CCCGACTCCT
19681 ACAAGTACAC GCCGGCCAAC ATCACGCTGC CCACCAACAC CAACACCTAC GATTACATGA
19741 ACGGCCGCGT GGTGGCGCCC TCGCTGGTGG ACGCCTACAT CAACATCGGG GCGCGCTGGT
19801 CGCTGGACCC CATGGACAAC GTCAACCCCT TCAACCACCA CCGCAACGCG GGCCTGCGAT
19861 ACCGCTCCAT GCTCCTGGGC AACGGGCGCT ACGTGCCCTT CCACATCCAG GTGCCCCAAA
19921 AGTTTTTCGC CATCAAGAGC CTCCTGCTCC TGCCCGGGTC CTACACCTAC GAGTGGAACT
19981 TCCGCAAGGA CGTCAACATG ATCCTGCAGA GCTCCCTCGG CAACGACCTG CGCACGGACG
20041 GGGCCTCCAT CGCCTTCACC AGCATCAACC TCTACGCCAC CTTCTTCCCC ATGGCGCACA
20101 ACACCGCCTC CACGCTCGAG GCCATGCTGC GCAACGACAC CAACGACCAG TCCTTCAACG
20161 ACTACCTCTC GGCGGCCAAC ATGCTCTACC CCATCCCGGC CAACGCCACC AACGTGCCCA
20221 TCTCCATCCC CTCGCGCAAC TGGGCCGCCT TCCGCGGCTG GTCCTTCACG CGCCTCAAGA
20281 CCCGCGAGAC GCCCTCGCTC GGCTCCGGGT TCGACCCCTA CTTCGTCTAC TCGGGCTCCA
20341 TCCCCTACCT CGACGGCACC TTCTACCTCA ACCACACCTT CAAGAAGGTC TCCATCACCT
20401 TCGACTCCTC CGTCAGCTGG CCCGGCAACG ACCGCCTCCT GACGCCCAAC GAGTTCGAAA
20461 TCAAGCGCAC CGTCGACGGA GAGGGGTACA ACGTGGCCCA GTGCAACATG ACCAAGGACT
20521 GGTTCCTGGT CCAGATGCTG GCCCACTACA ACATCGGCTA CCAGGGCTTC TACGTGCCCG
20581 AGGGCTACAA GGACCGCATG TACTCCTTCT TCCGCAACTT CCAGCCCATG AGCCGCCAGG
20641 TCGTGGACGA GGTCAACTAC AAGGACTACC AGGCCGTCAC CCTGGCCTAC CAGCACAACA
20701 ACTCGGGCTT CGTCGGCTAC CTCGCGCCCA CCATGCGCCA GGGCCAGCCC TACCCCGCCA
20761 ACTACCCCTA CCCGCTCATC GGCAAGAGCG CCGTCGCCAG CGTCACCCAG AAAAAGTTCC
20821 TCTGCGACCG GGTCATGTGG CGCATCCCCT TCTCCAGCAA CTTCATGTCC ATGGGCGCGC
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FIG. 8F

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20881 TCACCGACCT CGGCCAGAAC ATGCTCTACG CCAACTCCGC CCACGCGCTA GACATGAATT
20941 TCGAAGTCGA CCCCATGGAT GAGTCCACCC TTCTCTATGT TGTCTTCGAA GTCTTCGACG
21001 TCGTCCGAGT GCACCAGCCC CACCGCGGCG TCATCGAGGC CGTCTACCTG CGCACGCCCT
21061 TCTCGGCCGG CAACGCCACC ACCTAAGCCT CTTGCTTCTT GCAAGATGAC GGCCTGCGCG
21121 GGCTCCGGCG AGCAGGAGCT CAGGGCCATC CTCCGCGACC TGGGCTGCGG GCCCTGCTTC
21181 CTGGGCACCT TCGACAAGCG CTTCCCGGGA TTCATGGCCC CGCACAAGCT GGCCTGCGCC
21241 ATCGTCAACA CGGCCGGCCG CGAGACCGGG GGCGAGCACT GGCTGGCCTT CGCCTGGAAC
21301 CCGCGCTCCC ACACCTGCTA CCTCTTCGAC CCCTTCGGGT TCTCGGACGA GCGCCTCAAG
21361 CAGATCTACC AGTTCGAGTA CGAGGGCCTG CTGCGTCGCA GCGCCCTGGC CACCGAGGAC
21421 CGCTGCGTCA CCCTGGAAAA GTCCACCCAG ACCGTGCAGG GTCCGCGCTC GGCCGCCTGC
21481 GGGCTCTTCT GCTGCATGTT CCTGCACGCC TTCGTGCACT GGCCCGACCG CCCCATGGAC
21541 AAGAACCCCA CCATGAACTT GCTGACGGGG GTGCCCAACG GCATGCTCCA GTCGCCCCAG
21601 GTGGAACCCA CCCTGCGCCG CAACCAGGAG GCGCTCTACC GCTTCCTCAA CGCCCACTCC
21661 GCCTACTTTC GCTCCCACCG CGCGCGCATC GAGAAGGCCA CCGCCTTCGA CCGCATGAAT
21721 CAAGACATGT AATCCGGTGT GTGTATGTGA ATGCTTTATT CATCATAATA AACAGCACAT
21781 GTTTATGCCA CCTTCTCTGA GGCTCTGACT TTATTTAGAA ATCGAAGGGG TTCTGCCGGC
21841 TCTCGGCATG GCCCGCGGGC AGGGATACGT TGCGGAACTG GTACTTGGGC AGCCACTTGA
21901 ACTCGGGGAT CAGCAGCTTC GGCACGGGGA GGTCGGGGAA CGAGTCGCTC CACAGCTTGC
21961 GCGTGAGTTG CAGGGCGCCC AGCAGGTCGG GCGCGGAGAT CTTGAAATCG CAGTTGGGAC
22021 CCGCGTTCTG CGCGCGAGAG TTACGGTACA CGGGGTTGCA GCACTGGAAC ACCATCAGGG
22081 CCGGGTGCTT CACGCTCGCC AGCACCGTCG CGTCGGTGAT GCCCTCCACG TCCAGATCCT
22141 CGGCGTTGGC CATCCCGAAG GGGGTCATCT TGCAGGTCTG CCGCCCCATG CTGGGCACGC
22201 AGCCGGGCTT GTGGTTGCAA TCGCAGTGCA GGGGGATCAG CATCATCTGG GCCTGCTCGG
22261 AGCTCATGCC CGGGTACATG GCCTTCATGA AAGCCTCCAG CTGGCGGAAG GCCTGCTGCG
22321 CCTTGCCGCC CTCGGTGAAG AAGACCCCGC AGGACTTGCT AGAGAACTGG TTGGTGGCGC
22381 AGCCAGCGTC GTGCACGCAG CAGCGCGCGT CGTTGTTGGC CAGCTGCACC ACGCTGCGCC
22441 CCCAGCGGTT CTGGGTGATC TTGGCCCGGT CGGGGTTCTC CTTCAGCGCG CGCTGCCCGT
22501 TCTCGCTCGC CACATCCATC TCGATCGTGT GCTCCTTCTG GATCATCACG GTCCCGTGCA
22561 GGCACCGCAG CTTGCCCTCG GCCTCGGTGC ACCCGTGCAG CCACAGCGCG CAGCCGGTGC
22621 TCTCCCAGTT CTTGTGGGCG ATCTGGGAGT GCGAGTGCAC GAAGCCCTGC AGGAAGCGGC
22681 CCATCATCGT GGTCAGGGTC TTGTTGCTGG TGAAGGTCAG CGGAATGCCG CGGTGCTCCT
22741 CGTTCACATA CAGGTGGCAG ATACGGCGGT ACACCTCGCC CTGCTCGGGC ATCAGCTGGA
22801 AGGCGGACTT CAGGTCGCTC TCCACGCGGT ACCGGTCCAT CAGCAGCGTC ATCACTTCCA
22861 TGCCCTTCTC CCAGGCCGAA ACGATCGGCA GGCTCAGGGG GTTCTTCACC GTTGTCATCT
22921 TAGTCGCCGC CGCCGAAGTC AGGGGGTCGT TCTCGTCCAG GGTCTCAAAC ACTCGCTTGC
22981 CGTCCTTCTC GGTGATGCGC ACGGGGGGAA AGCTGAAGCC CACGGCCGCC AGCTCCTCCT
23041 CGGCCTGCCT TTCGTCCTCG CTGTCCTGGC TGATGTCTTG CAAAGGCACA TGCTTGGTCT
23101 TGCGGGGTTT CTTTTTGGGC GGCAGAGGCG GCGGCGGAGA CGTGCTGGGC GAGCGCGAGT
23161 TCTCGCTCAC CACGACTATT TCTTCTCCTT GGCCGTCGTC CGAGACCACG CGGCGGTAGG
23221 CATGCCTCTT CTGGGGCAGA GGCGGAGGCG ACGGGCTCTC GCGGTTCGGC GGGCGGCTGG
23281 CAGAGCCCCT TCCGCGTTCG GGGGTGCGCT CCTGGCGGCG CTGCTCTGAC TGACTTCCTC
23341 CGCGGCCGGC CATTGTGTTC TCCTAGGGAG CAAGCATGGA GACTCAGCCA TCGTCGCCAA
23401 CATCGCCATC TGCCCCCGCC GCCGCCGACG AGAACCAGCA GCAGCAGAAT GAAAGCTTAA
23461 CCGCCCCGCC GCCCAGCCCC ACCTCCGACG CCGCAGCCCC AGACATGCAA GAGATGGAGG
23521 AATCCATCGA GATTGACCTG GGCTACGTGA CGCCCGCGGA GCACGAGGAG GAGCTGGCAG
23581 CGCGCTTTTC AGCCCCGGAA GAGAACCACC AAGAGCAGCC AGAGCAGGAA GCAGAGAGCG
23641 AGCAGAACCA GGCTGGGCTC GAGCATGGCG ACTACCTGAG CGGGGCAGAG GACGTGCTCA
23701 TCAAGCATCT GGCCCGCCAA TGCATCATCG TCAAGGACGC GCTGCTCGAC CGCGCCGAGG
23761 TGCCCCTCAG CGTGGCGGAG CTCAGCCGCG CCTACGAGCG CAACCTCTTC TCGCCGCGCG
23821 TGCCCCCCAA GCGCCAGCCC AACGGCACCT GCGAGCCCAA CCCGCGCCTC AACTTCTACC
23881 CGGTCTTCGC GGTGCCCGAG GCCCTGGCCA CCTACCACCT CTTTTTCAAG AACCAAAGGA
23941 TCCCCGTCTC CTGCCGCGCC AACCGCACCC GCGCCGACGC CCTGCTCAAC CTGGGCCCCG
24001 GCGCCCGCCT ACCTGATATC GCCTCCTTGG AAGAGGTTCC CAAGATCTTC GAGGGTCTGG
24061 GCAGCGACGA GACTCGGGCC GCGAACGCTC TGCAAGGAAG CGGAGAGGAG CATGAGCACC
24121 ACAGCGCCCT GGTGGAGTTG GAAGGCGACA ACGCGCGCCT GGCGGTCCTC AAGCGCACGG
24181 TCGAGCTGAC CCACTTCGCC TACCCGGCGC TCAACCTGCC CCCCAAGGTC ATGAGCGCCG
24241 TCATGGACCA GGTGCTCATC AAGCGCGCCT CGCCCCTCTC GGAGGAGGAG ATGCAGGACC
24301 CCGAGAGCTC GGACGAGGGC AAGCCCGTGG TCAGCGACGA GCAGCTGGCG CGCTGGCTGG
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FIG. 8G

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25561 GAGAGCAGTC AGGCAGAGGA GGAGGAGATG GAAGACTGGG ACAGCACTCA GGCAGAGGAG
24361 GAGCGAGTAG CACCCCCCAG AGCCTGGAAG AGCGGCGCAA GCTCATGATG GCCGTGGTCC
24421 TGGTGACCGT GGAGCTGGAG TGTCTGCGCC GCTTCTTCGC CGACGCGGAG ACCCTGCGCA
24481 AGGTCGAGGA GAACCTGCAC TACCTCTTCA GACACGGGTT CGTGCGCCAG GCCTGCAAGA
24541 TCTCCAACGT GGAGCTGACC AACCTGGTCT CCTACATGGG CATCCTGCAC GAGAACCGCC
24601 TGGGGCAGAA CGTGCTGCAC ACCACCCTGC GCGGGGAGGC CCGCCGCGAC TACATCCGCG
24661 ACTGCGTCTA CCTGTACCTC TGCCACACCT GGCAGACGGG CATGGGCGTG TGGCAGCAGT
24721 GCCTGGAGGA GCAGAACCTG AAAGAGCTCT GCAAGCTCCT GCAGAAGAAC CTCAAGGCCC
24781 TGTGGACCGG GTTCGACGAG CGCACCACCG CCGCGGACCT GGCCGACCTC ATCTTCCCCG
24841 AGCGCCTGCG GCTGACGCTG CGCAACGGGC TGCCCGACTT TATGAGCCAA AGCATGTTGC
24901 AAAACTTTCG CTCTTTCATC CTCGAACGCT CCGGGATCCT GCCCGCCACC TGCTCCGCGC
24961 TGCCCTCGGA CTTCGTGCCG CTGACCTTCC GCGAGTGCCC CCCGCCGCTC TGGAGCCACT
25021 GCTACCTGCT GCGCCTGGCC AACTACCTGG CCTACCACTC GGACGTGATC GAGGACGTCA
25081 GCGGCGAGGG CCTGCTCGAG TGCCACTGCC GCTGCAACCT CTGCACGCCG CACCGCTCCC
25141 TGGCCTGCAA CCCCCAGCTG CTGAGCGAGA CCCAGATCAT CGGCACCTTC GAGTTGCAAG
25201 GCCCCGGCGA GGGCAAGGGG GGTCTGAAAC TCACCCCGGG GCTGTGGACC TCGGCCTACT
25261 TGCGCAAGTT CGTGCCCGAG GACTACCATC CCTTCGAGAT CAGGTTCTAC GAGGACCAAT
25321 CCCAGCCGCC CAAGGCCGAG CTGTCGGCCT GCGTCATCAC CCAGGGGGCC ATCCTGGCCC
25381 AATTGCAAGC CATCCAGAAA TCCCGCCAAG AATTTCTGCT GAAAAAGGGC CACGGGGTCT
25441 ACTTGGACCC CCAGACCGGA GAGGAGCTCA ACCCCAGCTT CCCCCAGGAT GCCCCGAGGA
25501 AGCAGCAAGA AGCTGAAAGT GGAGCTGCCG CCGCCGCCGG AGGATTTGGA GGAAGACTGG
25621 GACAGCCTGC AAGACAGTCT GGAGGAGGAA GACGAGGTGG AGGAGGCAGA GGAAGAAGCA
25681 GCCGCCGCCA GACCGTCGTC CTCGGCGGAG GAGGAGAAAG CAAGCAGCAC GGATACCATC
25741 TCCGCTCCGG GTCGGGGTCG CGGCGGCCGG GCCCACAGTA GATGGGACGA GACCGGGCGC
25801 TTCCCGAACC CCACCACCCA GACCGGTAAG AAGGAGCGGC AGGGATACAA GTCCTGGCGG
25861 GGGCACAAAA ACGCCATCGT CTCCTGCTTG CAAGCCTGCG GGGGCAACAT CTCCTTCACC
25921 CGGCGCTACC TGCTCTTCCA CCGCGGGGTG AACTTCCCCC GCAACATCTT GCATTACTAC
25981 CGTCACCTCC ACAGCCCCTA CTACTGTTTC CAAGAAGAGG CAGAAACCCA GCAGCAGCAG
26041 CAGCAGCAGA AAACCAGCGG CAGCAGCTAG AAAATCCACA GCGGCGGCAG GTGGACTGAG
26101 GATCGCGGCG AACGAGCCGG CGCAGACCCG GGAGCTGAGG AACCGGATCT TTCCCACCCT
26161 CTATGCCATC TTCCAGCAGA GTCGGGGGCA AGAGCAGGAA CTGAAAGTCA AGAACCGTTC
26221 TCTGCGCTCG CTCACCCGCA GTTGTCTGTA TCACAAGAGC GAAGACCAAC TTCAGCGCAC
26281 TCTCGAGGAC GCCGAGGCTC TCTTCAACAA GTACTGCGCG CTCACTCTTA AAGAGTAGCC
26341 CGCGCCCGCC CACACACGGA AAAAGGCGGG AATTACGTCA CCACCTGCGC CCTTCGCCCG
26401 ACCATCATCA TGAGCAAAGA GATTCCCACG CCTTACATGT GGAGCTACCA GCCCCAGATG
26461 GGCCTGGCCG CCGGCGCCGC CCAGGACTAC TCCACCCGCA TGAACTGGCT CAGTGCCGGG
26521 CCCGCGATGA TCTCACGGGT GAATGACATC CGCGCCCACC GAAACCAGAT ACTCCTAGAA
26581 CAGTCAGCGA TCACCGCCAC GCCCCGCCAT CACCTTAATC CGCGTAATTG GCCCGCCGCC
26641 CTGGTGTACC AGGAAATTCC CCAGCCCACG ACCGTACTAC TTCCGCGAGA CGCCCAGGCC
26701 GAAGTCCAGC TGACTAACTC AGGTGTCCAG CTGGCCGGCG GCGCCGCCCT GTGTCGTCAC
26761 CGCCCCGCTC AGGGTATAAA GCGGCTGGTG ATCCGAGGCA GAGGCACACA GCTCAACGAC
26821 GAGGTGGTGA GCTCTTCGCT GGGTCTGCGA CCTGACGGAG TCTTCCAACT CGCCGGATCG
26881 GGGAGATCTT CCTTCACGCC TCGTCAGGCC GTCCTGACTT TGGAGAGTTC GTCCTCGCAG
26941 CCCCGCTCGG GTGGCATCGG CACTCTCCAG TTCGTGGAGG AGTTCACTCC CTCGGTCTAC
27001 TTCAACCCCT TCTCCGGCTC CCCCGGCCAC TACCCGGACG AGTTCATCCC GAACTTCGAC
27061 GCCATCAGCG AGTCGGTGGA CGGCTACGAT TGAATGTCCC ATGGTGGCGC GGCTGACCTA
27121 GCTCGGCTTC GACACCTGGA CCACTGCCGC CGCTTCCGCT GCTTCGCTCG GGATCTCGCC
27181 GAGTTTGCCT ACTTTGAGCT GCCCGAGGAG CACCCTCAGG GCCCGGCCCA CGGAGTGCGG
27241 ATCGTCGTCG AAGGGGGTCT CGACTCCCAC CTGCTTCGGA TCTTCAGCCA GCGTCCGATC
27301 CTGGCCGAGC GCGAGCAAGG ACAGACCCTT CTGACCCTGT ACTGCATCTG CAACCACCCC
27361 GGCCTGCATG AAAGTCTTTG TTGTCTGCTG TGTACTGAGT ATAATAAAAG CTGAGATCAG
27421 CGACTACTCC GGACTTCCGT GTGTTCCTGC TATCAACCAG TCCCTGTTCT TCACCGGGAA
27481 CGAGACCGAG CTCCAGCTCC AGTGTAAGCC CCACAAGAAG TACCTCACCT GGCTGTTCCA
27541 GGGCTCTCCG ATCGCCGTTG TCAACCACTG CGACAACGAC GGAGTCCTGC TGAGCGGCCC
27601 TGCCAACCTT ACTTTTTCCA CCCGCAGAAG CAAGCTCCAG CTCTTCCAAC CCTTCCTCCC
27661 CGGGACCTAT CAGTGCGTCT CGGGACCCTG CCATCACACC TTCCACCTGA TCCCGAATAC
27721 CACAGCGTCG CTCCCCGCTA CTAACAACCA AACTACCCAC CAACGCCACC GTCGCGACCT
27781 TTCCTCTGGG TCTAATACCA CTACCGGAGG TGAGCTCCGA GGTCGACCAA CCTCTGGGAT
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FIG. 8H

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27841 TTACTACGGC CCCTGGGAGG TGGTAGGGTT AATAGCGCTA GGCCTAGTTG CGGGTGGGCT
27901 TTTGGCTCTC TGCTACCTAT ACCTCCCTTG CTGTTCGTAC TTAGTGGTGC TGTGTTGCTG
27961 GTTTAAGAAA TGGGGAAGAT CACCCTAGTG AGCTGCGGTG TGCTGGTGGC GGTGGTGCTT
28021 TCGATTGTGG GACTGGGCGG CGCGGCTGTA GTGAAGGAGA AGGCCGATCC CTGCTTGCAT
28081 TTCAATCCCG ACAAATGCCA GCTGAGTTTT CAGCCCGATG GCAATCGGTG CGCGGTGCTG
28141 ATCAAGTGCG GATGGGAATG CGAGAACGTG AGAATCGAGT ACAATAACAA GACTCGGAAC
28201 AATACTCTCG CGTCCGTGTG GCAGCCCGGG GACCCCGAGT GGTACACCGT CTCTGTCCCC
28261 GGTGCTGACG GCTCCCCGCG CACCGTGAAT AATACTTTCA TTTTTGCGCA CATGTGCGAC
28321 ACGGTCATGT GGATGAGCAA GCAGTACGAT ATGTGGCCCC CCACGAAGGA GAACATCGTG
28381 GTCTTCTCCA TCGCTTACAG CGTGTGCACG GCGCTAATCA CCGCTATCGT GTGCCTGAGC
28441 ATTCACATGC TCATCGCTAT TCGCCCCAGA AATAATGCCG AAAAAGAAAA ACAGCCATAA
28501 CACGTTTTTT CACACACCTT TTTCAGACCA TGGCCTCTGT TAAATTTTTG CTTTTATTTG
28561 CCAGTCTCAT TGCCGTCATT CATGGAATGA GTAATGAGAA AATTACTATT TACACTGGCA
28621 CTAATCACAC ATTGAAAGGT CCAGAAAAAG CCACAGAAGT TTCATGGTAT TGTTATTTTA
28681 ATGAATCAGA TGTATCTACT GAACTCTGTG GAAACAATAA CAAAAAAAAT GAGAGCATTA
28741 CTCTCATCAA GTTTCAATGT GGATCTGACT TAACCCTAAT TAACATCACT AGAGACTATG
28801 TAGGTATGTA TTATGGAACT ACAGCAGGCA TTTCGGACAT GGAATTTTAT CAAGTTTCTG
28861 TGTCTGAACC CACCACGCCT AGAATGACCA CAACCACAAA AACTACACCT GTTACCACTA
28921 TACAGCTCAC TACCAATGGC TTTCTTGCCA TGCTTCAAGT GGCTGAAAAT AGCACCAGCA
28981 TTCAACCCAC CCCACCCAGT GAGGAAATTC CCAGATCCAT GATTGGCATT ATTGTTGCTG
29041 TAGTGGTGTG CATGTTGATC ATCGCCTTGT GCATGGTGTA CTATGCCTTC TGCTACAGAA
29101 AGCACAGACT GAACGACAAG CTGGAACACT TACTAAGTGT TGAATTTTAA TTTTTTAGAA
29161 CCATGAAGAT CCTAGGCCTT TTAGTTTTTT CTATCATTAC CTCTGCTCTA TGCAATTCTG
29221 ACAATGAGGA CGTTACTGTC GTTGTCGGAT CAAATTATAC ACTAAAAGGT CCAGCAAAAG
29281 GTATGCTTTC GTGGTATTGT TGGTTCGGAA CTGACGAGCA ACAGACAGAA CTTTGCAATG
29341 CTCAAAAAGG CAAAACCTCA AATTCTAAAA TCTCTAATTA TCAATGCAAT GGCACTGACT
29401 TAGTATTGCT CAATGTCACG AAAGCATATG CTGGCAGTTA CACCTGCCCT GGAGATGATG
29461 CCGACAATAT GATTTTTTAC AAAGTGGAAG TGGTTGATCC CACTACTCCA CCGCCCACCA
29521 CCACAACTAC TCATACCACA CACACAGAAC AAACACCAGA GGCAGCAGAA GCAGAGTTGG
29581 CCTTCCAGGT TCACGGAGAT TCCTTTGCTG TCAATACCCC TACACCCGAT CAGCGGTGTC
29641 CGGGGCTGCT CGTCAGCGGC ATTGTCGGTG TGCTTTCGGG ATTAGCAGTC ATAATCATCT
29701 GCATGTTCAT TTTTGCTTGC TGCTATAGAA GGCTTTACCG ACAAAAATCA GACCCACTGC
29761 TGAACCTCTA TGTTTAATTT TTTCCAGAGC CATGAAGGCA GTTAGCGCTC TAGTTTTTTG
29821 TTCTTTGATT GGCATTGTTT TTAGTGCTGG GTTTTTGAAA AATCTTACCA TTTATGAAGG
29881 TGAGAATGCC ACTCTAGTGG GCATCAGTGG TCAAAATGTC AGCTGGCTAA AATACCATCT
29941 AGATGGGTGG AAAGACATTT GCGATTGGAA TGTCACTGTG TATACATGTA ATGGAGTTAA
30001 CCTCACCATT ACTAATGCCA CCCAAGATCA GAATGGTAGG TTTAAGGGCC AGAGTTTCAC
30061 TAGAAATAAT GGGTATGAAT CCCATAACAT GTTTATCTAT GACGTCACTG TCATCAGAAA
30121 TGAGACTGCC ACCACCACAC AGATGCCCAC TACACACAGT TCTACCACTA CTACCATGCA
30181 AACCACACAG ACAACCACTA CATCAACTCA GCATATGACC ACCACTACAG CAGCAAAGCC
30241 AAGTAGTGCA GCGCCTCAGC CCCAGGCTTT GGCTTTGAAA GCTGCACAAC CTAGTACAAC
30301 TACTAGGACC AATGAGCAGA CTACTGAATT TTTGTCCACT GTCGAGAGCC ACACCACAGC
30361 TACCTCCAGT GCCTTCTCTA GCACCGCCAA TCTCTCCTCG CTTTCCTCTA CACCAATCAG
30421 TCCCGCTACT ACTCCCACCC CAGCTCTTCT CCCCACTCCC CTGAAGCAAA CTGAGGACAG
30481 CGGCATGCAA TGGCAGATCA CCCTGCTCAT TGTGATCGGG TTGGTCATCC TGGCCGTGTT
30541 GCTCTACTAC ATCTTCTGCC GCCGCATTCC CAACGCGCAC CGCAAACCGG CCTACAAGCC
30601 CATCGTTATC GGGCAGCCGG AGCCGCTTCA GGTGGAAGGG GGTCTAAGGA ATCTTCTCTT
30661 CTCTTTTACA GTATGGTGAT TGAACTATGA TTCCTAGACA ATTCTTGATC ACTATTCTTA
30721 TCTGCCTCCT CCAAGTCTGT GCCACCCTCG CTCTGGTGGC CAACGCCAGT CCAGACTGTA
30781 TTGGGCCCTT CGCCTCCTAC GTGCTCTTTG CCTTCATCAC CTGCATCTGC TGCTGTAGCA
30841 TAGTCTGCCT GCTTATCACC TTCTTCCAGT TCATTGACTG GATCTTTGTG CGCATCGCCT
30901 ACCTGCGCCA CCACCCCCAG TACCGCGACC AGCGAGTGGC GCGGCTGCTC AGGCTCCTCT
30961 GATAAGCATG CGGGCTCTGC TACTTCTCGC GCTTCTGCTG TTAGTGCTCC CCCGCCCCGT
31021 CGACCCCCGG TCCCCCACTC AGTCCCCCGA AGAGGTCCGC AAATGCAAAT TCCAAGAACC
31081 CTGGAAATTC CTCAAATGCT ACCGCCAAAA ATCAGACATG CTTCCCAGCT GGATCATGAT
31141 CATTGGGATC GTGAACATTC TGGCCTGCAC CCTCATCTCC TTTGTGATTT ACCCCTGCTT
31201 TGACTTTGGT TGGAACTCGC CAGAGGCGCT CTATCTCCCG CCTGAACCTG ACACACCACC
31261 ACAGCAACCT CAGGCACACG CACTACCACC ACCACAGCCT AGGCCACAAT ACATGCCCAT
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FIG. 8I

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31321 ATTAGACTAT GAGGCCGAGC CACAGCGACC CATGCTCCCC GCTATTAGTT ACTTCAATCT
31381 AACCGGCGGA GATGACTGAC CCACTGGCCA ACAACAACGT CAACGACCTT CTCCTGGACA
31441 TGGACGGCCG CGCCTCGGAG CAGCGACTCG CCCAACTTCG CATTCGCCAG CAGCAGGAGA
31501 GAGCCGTCAA GGAGCTGCAG GACGGCATAG CCATCCACCA GTGCAAGAAA GGCATCTTCT
31561 GCCTGGTGAA ACAGGCCAAG ATCTCCTACG AGGTCACCCC GACCGACCAT CGCCTCTCCT
31621 ACGAGCTCCT GCAGCAGCGC CAGAAGTTCA CCTGCCTGGT CGGAGTCAAC CCCATCGTCA
31681 TCACCCAGCA GTCGGGCGAT ACCAAGGGGT GCATCCACTG CTCCTGCGAC TCCCCCGACT
31741 GCGTCCACAC TCTGATCAAG ACCCTCTGCG GCCTCCGCGA CCTCCTCCCC ATGAACTAAT
31801 CACCCCCTTA TCCAGTGAAA TAAATATCAT ATTGATGATG ATTTAAATAA AAAATAATCA
31861 TTTGATTTGA AATAAAGATA CAATCATATT GATGATTTGA GTTTTAAAAA ATAAAGAATC
31921 ACTTACTTGA AATCTGATAC CAGGTCTCTG TCCATGTTTT CTGCCAACAC CACCTCACTC
31981 CCCTCTTCCC AGCTCTGGTA CTGCAGACCC CGGCGGGCTG CAAACTTCCT CCACACGCTG
32041 AAGGGGATGT CAAATTCCTC CTGTCCCTCA ATCTTCATTT TATCTTCTAT CAGATGTCCA
32101 AAAAGCGCGT CCGGGTGGAT GATGACTTCG ACCCCGTCTA CCCCTACGAT GCAGACAACG
32161 CACCGACCGT GCCCTTCATC AACCCCCCCT TCGTCTCTTC AGATGGATTC CAAGAGAAGC
32221 CCCTGGGGGT GCTGTCCCTG CGACTGGCTG ACCCCGTCAC CACCAAGAAC GGGGAAATCA
32281 CCCTCAAGCT GGGAGAGGGG GTGGACCTCG ACTCCTCGGG AAAACTCATC TCCAACACGG
32341 CCACCAAGGC CGCCGCCCCT CTCAGTTTTT CCAACAACAC CATTTCCCTT AACATGGATA
32401 CCCCTCTTTA TACCAAAGAT GGAAAATTAT CCTTACAAGT TTCTCCACCG TTAAACATAT
32461 TAAAATCAAC CATTCTGAAC ACATTAGCTG TAGCTTATGG ATCAGGTTTA GGACTGAGTG
32521 GTGGCACTGC TCTTGCAGTA CAGTTGGCCT CTCCACTCAC TTTTGATGAA AAAGGAAATA
32581 TTAAAATTAA CCTAGCCAGT GGTCCATTAA CAGTTGATGC AAGTCGACTT AGTATCAACT
32641 GCAAAAGAGG GGTCACTGTC ACTACCTCAG GAGATGCAAT TGAAAGCAAC ATAAGCTGGC
32701 CTAAAGGTAT AAGATTTGAA GGTAATGGCA TAGCTGCAAA CATTGGCAGA GGATTGGAAT
32761 TTGGAACCAC TAGTACAGAG ACTGATGTCA CAGATGCATA CCCAATTCAA GTTAAATTGG
32821 GTACTGGCCT TACCTTTGAC AGTACAGGCG CCATTGTTGC TTGGAACAAA GAGGATGATA
32881 AACTTACATT ATGGACCACA GCCGACCCCT CGCCAAATTG CAAAATATAC TCTGAAAAAG
32941 ATGCCAAACT CACACTTTGC TTGACAAAGT GTGGAAGTCA AATTCTGGGT ACTGTGACTG
33001 TATTGGCAGT GAATAATGGA AGTCTCAACC CAATCACAAA CACAGTAAGC ACTGCACTCG
33061 TCTCCCTCAA GTTTGATGCA AGTGGAGTTT TGCTAAGCAG CTCCACATTA GACAAAGAAT
33121 ATTGGAACTT CAGAAAGGGA GATGTTACAC CTGCTGAGCC CTATACTAAT GCTATAGGTT
33181 TTATGCCTAA CATAAAGGCC TATCCTAAAA ACACATCTGC AGCTTCAAAA AGCCATATTG
33241 TCAGTCAAGT TTATCTCAAT GGGGATGAGG CCAAACCACT GATGCTGATT ATTACTTTTA
33301 ATGAAACTGA GGATGCAACT TGCACCTACA GTATCACTTT TCAATGGAAA TGGGATAGTA
33361 CTAAGTACAC AGGTGAAACA CTTGCTACCA GCTCCTTCAC CTTCTCCTAC ATCGCCCAAG
33421 AATGAACACT GTATCCCACC CTGCATGCCA ACCCTTCCCA CCCCACTCTG TCTATGGAAA
33481 AAACTCTGAA GCACAAAATA AAATAAAGTT CAAGTGTTTT ATTGATTCAA CAGTTTTACA
33541 GGATTCGAGC AGTTATTTTT CCTCCACCCT CCCAGGACAT GGAATACACC ACCCTCTCCC
33601 CCCGCACAGC CTTGAACATC TGAATGCCAT TGGTGATGGA CATGCTTTTG GTCTCCACGT
33661 TCCACACAGT TTCAGAGCGA GCCAGTCTCG GGTCGGTCAG GGAGATGAAA CCCTCCGGGC
33721 ACTCCCGCAT CTGCACCTCA CAGCTCAACA GCTGAGGATT GTCCTCGGTG GTCGGGATCA
33781 CGGTTATCTG GAAGAAGCAG AAGAGCGGCG GTGGGAATCA TAGTCCGCGA ACGGGATCGG
33841 CCGGTGGTGT CGCATCAGGC CCCGCAGCAG TCGCTGCCGC CGCCGCTCCG TCAAGCTGCT
33901 GCTCAGGGGG TCCGGGTCCA GGGACTCCCT CAGCATGATG CCCACGGCCC TCAGCATCAG
33961 TCGTCTGGTG CGGCGGGCGC AGCAGCGCAT GCGGATCTCG CTCAGGTCGC TGCAGTACGT
34021 GCAACACAGG ACCACCAGGT TGTTCAACAG TCCATAGTTC AACACGCTCC AGCCGAAACT
34081 CATCGCGGGA AGGATGCTAC CCACGTGGCC GTCGTACCAG ATCCTCAGGT AAATCAAGTG
34141 GCGCTCCCTC CAGAACACGC TGCCCACGTA CATGATCTCC TTGGGCATGT GGCGGTTCAC
34201 CACCTCCCGG TACCACATCA CCCTCTGGTT GAACATGCAG CCCCGGATGA TCCTGCGGAA
34261 CCACAGGGCC AGCACCGCCC CGCCCGCCAT GCAGCGAAGA GACCCCGGGT CCCGGCAATG
34321 GCAATGGAGG ACCCACCGCT CGTACCCGTG GATCATCTGG GAGCTGAACA AGTCTATGTT
34381 GGCACAGCAC AGGCATATGC TCATGCATCT CTTCAGCACT CTCAGCTCCT CGGGGGTCAA
34441 AACCATATCC CAGGGCACGG GGAACTCTTG CAGGACAGCG AACCCCGCAG AACAGGGCAA
34501 TCCTCGCACA TAACTTACAT TGTGCATGGA CAGGGTATCG CAATCAGGCA GCACCGGGTG
34561 ATCCTCCACC AGAGAAGCGC GGGTCTCGGT CTCCTCACAG CGTGGTAAGG GGGCCGGCCG
34621 ATACGGGTGA TGGCGGGACG CGGCTGATCG TGTTCGCGAC CGTGTCATGA TGCAGTTGCT
34681 TTCGGACATT TTCGTACTTG CTGTAGCAGA ACCTGGTCCG GGCGCTGCAC ACCGATCGCC
34741 GGCGGCGGTC CCGGCGCTTG GAACGCTCGG TGTTGAAATT GTAAAACAGC CACTCTCTCA
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FIG. 8J

34801 GACCGTGCAG CAGATCTAGG GCCTCAGGAG TGATGAAGAT CCCATCATGC CTGATAGCTC
34861 TGATCACATC GACCACCGTG GAATGGGCCA GACCCAGCCA GATGATGCAA TTTTGTTGGG
34921 TTTCGGTGAC GGCGGGGGAG GGAAGAACAG GAAGAACCAT GATTAACTTT TAATCCAAAC
34981 GGTCTCGGAG CACTTCAAAA TGAAGGTCGC GGAGATGGCA CCTCTCGCCC CCGCTGTGTT
35041 GGTGGAAAAT AACAGCCAGG TCAAAGGTGA TACGGTTCTC GAGATGTTCC ACGGTGGCTT
35101 CCAGCAAAGC CTCCACGCGC ACATCCAGAA ACAAGACAAT AGCGAAAGCG GGAGGGTTCT
35161 CTAATTCCTC AATCATCATG TTACACTCCT GCACCATCCC CAGATAATTT TCATTTTTCC
35221 AGCCTTGAAT GATTCGAACT AGTTCCTGAG GTAAATCCAA GCCAGCCATG ATAAAGAGCT
35281 CGCGCAGAGC GCCCTCCACC GGCATTCTTA AGCACACCCT CATAATTCCA AGATATTCTG
35341 CTCCTGGTTC ACCTGCAGCA GATTGACAAG CGGAATATCA AAATCTCTGC CGCGATCCCT
35401 AAGCTCCTCC CTCAGCAATA ACTGTAAGTA CTCTTTCATA TCCTCTCCGA AATTTTTAGC
35461 CATAGGACCA CCAGGAATAA GATTAGGGCA AGCCACAGTA CAGATAAACC GAAGTCCTCC
35521 CCAGTGAGCA TTGCCAAATG CAAGACTGCT ATAAGCATGC TGGCTAGACC CGGTGATATC
35581 TTCCAGATAA CTGGACAGAA AATCACCCAG GCAATTTTTA AGAAAATCAA CAAAAGAAAA
35641 ATCCTCCAGG TGCACGTTTA GAGCCTCGGG AACAACGATG AAGTAAATGC AAGCGGTGCG
35701 TTCCAGCATG GTTAGTTAGC TGATCTGTAA AAAACAAAAA ATAAAACATT AAACCATGCT
35761 AGCCTGGCGA ACAGGTGGGT AAATCGTTCT CTCCAGCACC AGGCAGGCCA CGGGGTCTCC
35821 GGCGCGACCC TCGTAAAAAT TGTCGCTATG ATTGAAAACC ATCACAGAGA GACGTTCCCG
35881 GTGGCCGGCG TGAATGATTC GACAAGATGA ATACACCCCC GGAACATTGG CGTCCGCGAG
35941 TGAAAAAAAG CGCCCGAGGA AGCAATAAGG CACTACAATG CTCAGTCTCA AGTCCAGCAA
36001 AGCGATGCCA TGCGGATGAA GCACAAAATC CTCAGGTGCG TACAAAATGT AATTACTCCC
36061 CTCCTGCACA GGCAGCGAAG CCCCCGATCC CTCCAGATAC ACATACAAAG CCTCAGCGTC
36121 CATAGCTTAC CGAGCAGCAG CACACAACAG GCGCAAGAGT CAGAGAAAGG CTGAGCTCTA
36181 ACCTGTCCAC CCGCTCTCTG CTCAATATAT AGCCCAGATC TACACTGACG TAAAGGCCAA
36241 AGTCTAAAAA TACCCGCCAA ATAATCACAC ACGCCCAGCA CACGCCCAGA AACCGGTGAC
36301 ACACTCAAAA AAATACGCGC ACTTCCTCAA ACGCCCAAAC TGCCGTCATT TCCGGGTTCC
36361 CACGCTACGT CATCGGAATT CGACTTTCAA ATTCCGTCGA CCGTTAAAAA CGTCACCCGC
36421 CCCGCCCCTA ACGGTCGCCC GTCTCTCGGC CAATCACCTT CCTCCCTCCC CAAATTCAAA
36481 CAGCTCATTT GCATATTAAC GCGCACCAAA AGTTTGAGGT ATATTATTGA TGATG
(SEQ ID NO: 4)

FIG. 8K

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   1 catcatcaat aatatacctc aaacttttgg tgcgcgttaa tatgcaaatg aggtatttga
  61 atttggggat gcggggcggt gattggctgc gggagcggcg accgttaggg gcggggcggg
 121 tgacgttttg atgacgtggc cgtgaggcgg agccggtttg caagttctcg tgggaaaagt
 181 gacgtcaaac gaggtgtggt ttgaacacgg aaatactcaa ttttcccgcg ctctctgaca
 241 ggaaatgagg tgtttctggg cggatgcaag tgaaaacggg ccattttcgc gcgaaaactg
 301 aatgaggaag tgaaaatctg agtaattccg cgtttatggc agggaggagt atttgccgag
 361 ggccgagtag actttgaccg attacgtggg ggtttcgatt accgtatttt tcacctaaat
 421 ttccgcgtac ggtgtcaaag tccggtgttt ttacgtaggt gtcagctgat cgccagggta
 481 tttaaacctg cgctctctag tcaagaggcc actcttgagt gccagcgagt agagttttct
 541 cctccgcgcc gcgagtcaga tctacacttt gaaagatgag gcacctgaga gacctgcccg
 601 gtaatgtttt cctggctact gggaacgaga ttctggaact ggtggtggac gccatgatgg
 661 gtgacgaccc tccggagccc cctaccccat ttgaagcgcc ttcgctgtac gatttgtatg
 721 atctggaggt ggatgtgccc gagaacgacc ccaacgagga ggcggtgaat gatttgttta
 781 gcgatgccgc gctgctggct gccgagcagg ctaatacgga ctctggctca gacagcgatt
 841 cctctctcca taccccgaga cccggcagag gtgagaaaaa gatccccgag cttaaagggg
 901 aagagctcga cctgcgctgc tatgaggaat gcttgcctcc gagcgatgat gaggaggacg
 961 aggaggcgat tcgagctgca gcgaaccagg gagtgaaaac agcgagcgag ggctttagcc
1021 tggactgtcc tactctgccc ggacacggct gtaagtcttg tgaatttcat cgcatgaata
1081 ctggagataa gaatgtgatg tgtgccctgt gctatatgag agcttacaac cattgtgttt
1141 acagtaagtg tgattaactt tagctgggga ggcagagggt gactgggtgc tgactggttt
1201 atttatgtat atgtttttta tgtgtaggtc ccgtctctga cgtagatgag acccccacta
1261 cagagtgcat ttcatcaccc ccagaaattg gcgaggaacc gcccgaagat attattcata
1321 gaccagttgc agtgagagtc accgggcgta gagcagctgt ggagagtttg gatgacttgc
1381 tacagggtgg ggatgaacct ttggacttgt gtacccggaa acgccccagg cactaagtgc
1441 cacacatgtg tgtttactta aggtgatgtc agtatttata gggtgtggag tgcaataaaa
1501 tccgtgttga ctttaagtgc gtggtttatg actcaggggt ggggactgtg ggtatataag
1561 caggtgcaga cctgtgtggt cagttcagag caggactcat ggagatctgg acagtcttgg
1621 aagactttca ccagactaga cagctgctag agaactcatc ggagggagtc tcttacctgt
1681 ggagattctg cttcggtggg cctctagcta agctagtcta tagggccaag caggattata
1741 aggatcaatt tgaggatatt ttgagagagt gtcctggtat ttttgactct ctcaacttgg
1801 gccatcagtc tcactttaac cagagtattc tgagagccct tgacttttct actcctggca
1861 gaactaccgc cgcggtagcc ttttttgcct ttatccttga caaatggagt caagaaaccc
1921 atttcagcag ggattaccgt ctggactgct tagcagtagc tttgtggaga acatggaggt
1981 gccagcgcct gaatgcaatc tccggctact tgccagtaca gccggtagac acgctgagga
2041 tcctgagtct ccagtcaccc caggaacacc aacgccgcca gcagccgcag caggagcagc
2101 agcaagagga ggaccgagaa gagaacctga gagccggtct ggaccctccg gtggcggagg
2161 aggaggagta gctgacttgt ttcccgagct gcgccgggtg ctgactaggt cttccagtgg
2221 acgggagagg gggattaagc gggagaggca tgaggagact agccacagaa ctgaactgac
2281 tgtcagtctg atgagtcgca ggcgcccaga atcggtgtgg tggcatgagg tgcagtcgca
2341 ggggatagat gaggtctcag tgatgcatga gaaatattcc ctagaacaag tcaagacttg
2401 ttggttggag cccgaggatg attgggaggt agccatcagg aattatgcca agctggctct
2461 gaggccagac aagaagtaca agattaccaa actgattaat atcagaaatt cctgctacat
2521 ttcagggaat ggggccgagg tggagatcag tacccaggag agggtggcct tcagatgctg
2581 catgatgaat atgtacccgg gggtggtggg catggaggga gtcaccttta tgaacgcgag
2641 gttcaggggt gatgggtata atggggtggt ctttatggcc aacaccaagc tgacagtgca
2701 cggatgctcc ttctttggct tcaataacat gtgcattgag gcctggggca gtgtttcagt
2761 gaggggatgc agtttttcag ccaactggat gggggtcgtg ggcagaacca agagcatggt
2821 gtcagtgaag aaatgcctgt tcgagaggtg ccacctgggg gtgatgagcg agggcgaagc
2881 caaagtcaaa cactgcgcct ctaccgagac gggctgcttt gtactgatca agggcaatgc
2941 caaagtcaag cataatatga tctgtggggc ctcggatgag cgcggctacc agatgctgac
3001 ctgcgccggt gggaacagcc atatgctagc caccgtgcat gtggcctcgc acccccgcaa
3061 gacatggccc gagttcgagc acaacgtcat gacccgctgc aatgtgcacc tggggtcccg
3121 ccgaggcatg ttcatgccct accagtgcaa catgcaattt gtgaaggtgc tgctggagcc
3181 cgatgccatg tccagagtga gcctgacggg ggtgtttgac atgaatgtgg agctgtggaa
3241 aattctgaga tatgatgaat ccaagaccag gtgccgggcc tgcgaatgcg gaggcaagca
3301 cgccaggctt cagcccgtgt gtgtggaggt gacggaggac ctgcgacccg atcatttggt
3361 gttgtcctgc aacgggacgg agttcggctc cagcggggaa gaatctgact agagtgagta
3421 gtgtttggga ctgggtggga gcctgcatga tgggcagaat gactaaaatc tgtgtttttc
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FIG. 9A

3481 tgcgcagcag catgagcgga agcgcctcct ttgagggagg ggtattcagc ccttatctga
3541 cggggcgtct cccctcctgg gcgggagtgc gtcagaatgt gatgggatcc acggtggacg
3601 gccggcccgt gcagcccgcg aactcttcaa ccctgaccta cgcgaccctg agctcctcgt
3661 ccgtggacgc agctgccgcc gcagctgctg cttccgccgc cagcgccgtg cgcggaatgg
3721 ccctgggcgc cggctactac agctctctgg tggccaactc gagttccacc aataatcccg
3781 ccagcctgaa cgaggagaag ctgctgctgc tgatggccca gctcgaggcc ctgacccagc
3841 gcctgggcga gctgacccag caggtggctc agctgcaggc ggagacgcgg gccgcggttg
3901 ccacggtgaa aaccaaataa aaaatgaatc aataaataaa cggagacggt tgttgatttt
3961 aacacagagt cttgaatctt tatttgattt ttcgcgcgcg gtaggccctg gaccaccggt
4021 ctcgatcatt gagcacccgg tggatctttt ccaggacccg gtagaggtgg gcttggatgt
4081 tgaggtacat gggcatgagc ccgtcccggg ggtggaggta gctccattgc agggcctcgt
4141 gctcgggggt ggtgttgtaa atcacccagt catagcaggg gcgcagggcg tggtgctgca
4201 cgatgtcctt gaggaggaga ctgatggcca cgggcagccc cttggtgtag gtgttgacga
4261 acctgttgag ctgggaggga tgcatgcggg gggagatgag atgcatcttg gcctggatct
4321 tgagattggc gatgttcccg cccagatccc gccgggggtt catgttgtgc aggaccacca
4381 gcacggtgta tccggtgcac ttggggaatt tgtcatgcaa cttggaaggg aaggcgtgaa
4441 agaatttgga gacgcccttg tgaccgccca ggttttccat gcactcatcc atgatgatgg
4501 cgatgggccc gtgggcggcg gcttgggcaa agacgtttcg ggggtcggac acatcgtagt
4561 tgtggtcctg ggtgagctcg tcataggcca ttttaatgaa tttggggcgg agggtgcccg
4621 actgggggac gaaggtgccc tcgatcccgg gggcgtagtt gccctcgcag atctgcatct
4681 cccaggcctt gagctcggag gggggatca tgtccacctg cggggcgatg aaaaaaacgg
4741 tttccggggc gggggagatg agctgggccg aaagcaggtt ccggagcagc tgggacttgc
4801 cgcagccggt ggggccgtag atgacccga tgaccggctg caggtggtag ttgagggaga
4861 gacagctgcc gtcctcgcgg aggaggggg ccacctcgtt catcatctcg cgcacatgca
4921 tgttctcgcg cacgagttcc gccaggaggc gctcgccccc aagcgagagg agctcttgca
4981 gcgaggcgaa gtttttcagc ggcttgagcc cgtcggccat gggcattttg gagagggtct
5041 gttgcaagag ttccagacgg tcccagagct cggtgatgtg ctctagggca tctcgatcca
5101 gcagacctcc tcgtttcgcg ggttggggcg actgcgggag tagggcacca ggcgatgggc
5161 gtccagcgag gccagggtcc ggtccttcca ggggcgcagg gtccgcgtca gcgtggtctc
5221 cgtcacggtg aaggggtgcg cgccgggctg ggcgcttgcg agggtgcgct tcaggctcat
5281 ccggctggtc gagaaccgct cccggtcggc gccctgcgcg tcggccaggt agcaattgag
5341 catgagttcg tagttgagcg cctcggccgc gtggcccttg gcgcggagct taccttttgga
5401 agtgtgtccg cagacgggac agaggaggga cttgagggcg tagagcttgg gggcgaggaa
5461 gacggactcg ggggcgtagg cgtccgcgcc gcagctggcg cagacggtct cgcactccac
5521 gagccaggtg aggtctggcc ggtcggggtc aaaaacgagg tttcctccgt gctttttgat
5581 gcgtttctta cctctggtct ccatgagctc gtgtccccgc tgggtgacaa agaggctgtc
5641 cgtgtccccg tagaccgact ttatgggccg gtcctcgagc ggggtgccgc ggtcctcgtc
5701 gtagaggaac cccgcccact ccgagacgaa ggcccgggtc caggccagca cgaaggaggc
5761 cacgtgggag gggtagcggt cgttgtccac cagcgggtcc accttctcca gggtatgcaa
5821 gcacatgtcc ccctcgtcca catccaggaa ggtgattggc ttgtaagtgt aggccacgtg
5881 accgggggtc ccggccgggg gggtataaaa gggggcgggc ccctgctcgt cctcactgtc
5941 ttccggatcg ctgtccagga gcgccagctg ttggggtagg tattccctct cgaaggcggg
6001 catgacctcg gcactcaggt tgtcagtttc tagaaacgag gaggatttga tattgacggt
6061 gccgttggag acgcctttca tgagcccctc gtccatctgg tcagaaaaga cgatcttttt
6121 gttgtcgagc ttggtggcga aggagccgta gagggcgttg gagagcagct tggcgatgga
6181 gcgcatggtc tggttctttt ccttgtcggc gcgctccttg gcggcgatgt tgagctgcac
6241 gtactcgcgc gccacgcact tccattcggg gaagacggtg gtgagcttgt cgggcacgat
6301 tctgacccgc cagccgcggt tgtgcagggt gatgaggtcc acgctggtgg ccacctcgcc
6361 gcgcaggggc tcgttggtcc agcagaggcg cccgcccttg cgcgagcaga agggggggcag
6421 cgggtccagc atgagctcgt cgggggggtc ggcgtccacg gtgaagatgc cgggcaggag
6481 ctcggggtcg aagtagctga tgcaggtgcc cagatcgtcc agcgccgctt gccagtcgcg
6541 cacggccagc gcgcgctcgt aggggctgag gggcgtgccc cagggcatgg ggtgcgtgag
6601 cgcggaggcg tacatgccgc agatgtcgta gacgtagagg ggctcctcga ggacgccgat
6661 gtaggtgggg tagcagcgcc ccccgcggat gctggcgcgc acgtagtcgt acagctcgtg
6721 cgagggcgcg aggagcccgg tgccgaggtt ggagcgctgc ggcttttcgg cgcggtagac
6781 gatctggcgg aagatggcgt gggagttgga ggagatggtg ggcctctgga agatgttgaa
6841 gtgggcgtgg ggcagtccga ccgagtccct gatgaagtgg gcgtaggagt cctgcagctt
6901 ggcgacgagc tcggcggtga cgaggacgtc cagggcgcag tagtcgaggg tctcttggat

FIG. 9B

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 6961 gatgtcgtac ttgagctggc ccttctgctt ccacagctcg cggttgagaa ggaactcttc
 7021 gcggtccttc cagtactctt cgaggggaa cccgtcctga tcggcacggt aagagcccac
 7081 catgtagaac tggttgacgg ccttgtaggc gcagcagccc ttctccacgg ggagggcgta
 7141 agcttgcgcg gccttgcgca gggaggtgtg ggtgagggcg aaggtgtcgc gcaccatgac
 7201 cttgaggaac tggtgcttga agtcgaggtc gtcgcagccg ccctgctccc agagctggaa
 7261 gtccgtgcgc ttcttgtagg cggggttggg caaagcgaaa gtaacatcgt tgaagaggat
 7321 cttgcccgcg cggggcatga agttgcgagt gatgcggaaa ggctggggca cctcggcccg
 7381 gttgttgatg acctgggcgg cgaggacgat ctcgtcgaag ccgttgatgt tgtgcccgac
 7441 gatgtagagt tccacgaatc gcgggcggcc cttgacgtgg ggcagcttct tgagctcgtc
 7501 gtaggtgagc tcggcggggt cgctgaggcc gtgctgctcg agggcccagt cggcgaggtg
 7561 ggggttggcg ccgaggaagg aagtccagag atccacggcc agggcggtct gcaagcggtc
 7621 ccggtactga cggaactgct ggcccacggc catttttcg ggggtgacgc agtagaaggt
 7681 gcgggggtcg ccgtgccagc ggtcccactt gagctggagg gcgaggtcgt gggcgagctc
 7741 gacgagcggc gggtccccgg agagtttcat gaccagcatg aaggggacga gctgcttgcc
 7801 gaaggacccc atccaggtgt aggtttccac gtcgtaggtg aggaagagcc tttcggtgcg
 7861 aggatgcgag ccgatgggga agaactggat ctcctgccac cagttggagg aatggctgtt
 7921 gatgtgatgg aagtagaaat gccgacggcg cgccgagcac tcgtgcttgt gtttatacaa
 7981 gcgtccgcag tgctcgcaac gctgcacggg atgcacgtgc tgcacgagct gtacctgggt
 8041 tccttttgacg aggaatttca gtgggcagtg gagcgctggc ggctgcatct ggtgctgtac
 8101 tacgtcctgg ccatcggcgt ggccatcgtc tgcctcgatg gtggtcatgc tgacgaggcc
 8161 gcgcgggagg caggtccaga cctcggctcg gacgggtcgg agagcgagga cgagggcgcg
 8221 caggccggag ctgtccaggg tcctgagacg ctgcggagtc aggtcagtgg gcagcggcgg
 8281 cgcgcggttg acttgcagga gcttttccag ggcgcgcggg aggtccagat ggtacttgat
 8341 ctccacggcg ccgttggtgg cgacgtccac ggcttgcagg gtcccgtgcc cctggggcgc
 8401 caccaccgtg ccccgtttct tcttgggtgc tggcggcggc ggctccatgc ttagaagcgg
 8461 cggcgaggac gcgcgccggg cggcaggggc ggctcggggc ccggaggcag gggcggcagg
 8521 ggcacgtcgg cgccgcgcgc gggcaggttc tggtactgcg cccggagaag actggcgtga
 8581 gcgacgacgc gacggttgac gtcctggatc tgacgcctct gggtgaaggc cacgggaccc
 8641 gtgagtttga acctgaaaga gagttcgaca gaatcaatct cggtatcgtt gacggcggcc
 8701 tgccgcagga tctcttgcac gtcgcccgag ttgtcctggt aggcgatctc ggtcatgaac
 8761 tgctcgatct cctcctcctg aaggtctccg cgaccggcgc gctcgacggt ggccgcgagg
 8821 tcgttggaga tgcggcccat gagctgcgag aaggcgttca tgccggcctc gttccagacg
 8881 cggctgtaga ccacggctcc gtcggggtcg cgcgcgcgca tgaccacctg ggcgaggttg
 8941 agctcgacgt ggcgcgtgaa gaccgcgtag ttgcagaggc gctggtagag gtagttgagc
 9001 gtggtggcga tgtgctcggt gacgaagaag tacatgatcc agcggcggag cggcatctcg
 9061 ctgacgtcgc ccagggcttc caagcgctcc atggcctcgt agaagtccac ggcgaagttg
 9121 aaaaactggg agttgcgcgc cgagacggtc aactcctcct ccagaagacg gatgagctcg
 9181 gcgatggtgg cgcgcacctc gcgctcgaag gccccggggg gctcctcttc ttccatctcc
 9241 tcctcctctt ccatctcctc cactaacatc tcttctactt cctcctcagg aggcggcggc
 9301 gggggagggg ccctgcgtcg ccggcggcgc acgggcagac ggtcgatgaa gcgctcgatg
 9361 gtctccccgc gccggcgacg catggtctcg gtgacggcgc gcccgtcctc gcggggccgc
 9421 agcgtgaaga cgccgccgcg catctccagg tggccgccgg gggggtctcc gttgggcagg
 9481 gagaggcgcc tgacgatgca tcttatcaat tggcccgtag ggactccgcg caaggacctg
 9541 agcgtctcga gatccacggg atccgaaaac cgctgaacga aggcttcgag ccagtcgcag
 9601 tcgcaaggta ggctgagccc ggtttcttgt tcttcgggta tttggtcggg aggcgggcgg
 9661 gcgatgctgc tggtgatgaa gttgaagtag gcggtcctga gacggcggat ggtggcgagg
 9721 agcaccaggt ccttgggccc ggcttgctgg atgcgcagac ggtcggccat gccccaggcg
 9781 tggtcctgac acctggcgag gtccttgtag tagtcctgca tgagccgctc cacgggcacc
 9841 tcctcctcgc ccgcgcggcc gtgcatgcgc gtgagcccga acccgcgctg cggctggacg
 9901 agcgccaggt cggcgacgac gcgctcggcg aggatggcct gctggatctg ggtgagggtg
 9961 gtctggaagt cgtcgaagtc gacgaagcgg tggtaggctc cggtgttgat ggtgtaggag
10021 cagttggcca tgacggacca gttgacggtc tggtggccgg ggcgcacgag ctcgtggtac
10081 ttgaggcgcg agtaggcgcg cgtgtcgaag atgtagtcgt tgcaggtgcg cacgaggtac
10141 tggtatccga cgaggaagtg cggcggcggc tggcggtaga gcggccatcg ctcggtggcg
10201 ggggcgccgg gcgcgaggtc ctcgagcatg aggcggtggt agccgtagat gtacctggac
10261 atccaggtga tgccggcggc ggtggtggag gcgcgcggga actcgcggac gcggttccag
10321 atgttgcgca gcggcaggaa gtagttcatg gtggccgcgg tctggcccgt gaggcgcgcg
10381 cagtcgtgga tgctctagac atacgggcaa aaacgaaagc ggtcagcggc tcgactccgt
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FIG. 9C

10441 ggcctggagg ctaagcgaac gggttgggct gcgcgtgtac cccggttcga gtccctgctc
10501 gaatcaggct ggagccgcag ctaacgtggt actggcactc ccgtctcgac ccaagcctgc
10561 taacgaaacc tccaggatac ggaggcgggt cgttttggcc attttcgtca ggccggaaat
10621 gaaactagta agcgcggaaa gcggccgtcc gcgatggctc gctgccgtag tctggagaaa
10681 gaatcgccag ggttgcgttg cggtgtgccc cggttcgagc ctcagcgctc ggcgccggcc
10741 ggattccgcg gctaacgtgg gcgtggctgc cccgtcgttt ccaagacccc ttagccagcc
10801 gacttctcca gttacggagc gagcccctct ttttcttgtg tttttgccag atgcatcccg
10861 tactgcggca gatgcgcccc caccctccac cacaaccgcc cctaccgcag cagcagcaac
10921 agccggcgct tctgcccccg ccccagcagc agcagccagc cactaccgcg gcggccgccg
10981 tgagcggagc cggcgttcag tatgacctgg ccttggaaga gggcgagggg ctggcgcggc
11041 tgggggcgtc gtcgccggag cggcacccgc gcgtgcagat gaaaagggac gctcgcgagg
11101 cctacgtgcc caagcagaac ctgttcagag acaggagcgg cgaggagccc gaggagatgc
11161 gcgcctcccg cttccacgcg gggcgggagc tgcggcgcgg cctggaccga aagcgggtgc
11221 tgagggacga ggatttcgag gcggacgagc tgacggggat cagccccgcg cgcgcgcacg
11281 tggccgcggc caacctggtc acggcgtacg agcagaccgt gaaggaggag agcaacttcc
11341 aaaaatcctt caacaaccac gtgcgcacgc tgatcgcgcg cgaggaggtg accctgggcc
11401 tgatgcacct gtgggacctg ctggaggcca tcgtgcagaa ccccacgagc aagccgctga
11461 cggcgcagct gtttctggtg gtgcagcaca gtcgggacaa cgagacgttc agggaggcgc
11521 tgctgaatat caccgagccc gagggccgct ggctcctgga cctggtgaac attctgcaga
11581 gcatcgtggt gcaggagcgc gggctgccgc tgtccgagaa gctggcggcc atcaacttct
11641 cggtgctgag cctgggcaag tactacgcta ggaagatcta caagaccccg tacgtgccca
11701 tagacaagga ggtgaagatc gacgggtttt acatgcgcat gaccctgaaa gtgctgaccc
11761 tgagcgacga tctgggggtg taccgcaacg acaggatgca ccgcgcggtg agcgccagcc
11821 gccggcgcga gctgagcgac caggagctga tgcacagcct gcagcgggcc ctgaccgggg
11881 ccgggaccga gggggagagc tactttgaca tgggcgcgga cctgcgctgg cagcctagcc
11941 gccgggcctt ggaagctgcc ggcggttccc cctacgtgga ggaggtggac gatgaggagg
12001 aggagggcga gtacctggaa gactgatggc gcgaccgtat ttttgctaga tgcagcaaca
12061 gccaccgccg cctcctgatc ccgcgatgcg ggcggcgctg cagagccagc cgtccggcat
12121 taactcctcg gacgattgga cccaggccat gcaacgcatc atggcgctga cgacccgcaa
12181 tcccgaagcc tttagacagc agcctcaggc caaccgactc tcggccatcc tggaggccgt
12241 ggtgccctcg cgctcgaacc ccacgcacga gaaggtgctg gccatcgtga acgcgctggt
12301 ggagaacaag gccatccgcg gcgacgaggc cgggctggtg tacaacgcgc tgctggagcg
12361 cgtggcccgc tacaacagca ccaacgtgca gacgaacctg gaccgcatgg tgaccgacgt
12421 gcgcgaggcg gtgtcgcagc gcgagcggtt ccaccgcgag tcgaacctgg gctccatggt
12481 ggcgctgaac gccttcctga gcacgcagcc cgccaacgtg ccccggggcc aggaggacta
12541 caccaacttc atcagcgcgc tgcggctgat ggtggccgag gtgccccaga gcgaggtgta
12601 ccagtcgggg ccggactact tcttccagac cagtcgccag ggcttgcaga ccgtgaacct
12661 gagccaggct ttcaagaact tgcagggact gtggggcgtg caggccccgg tcggggaccg
12721 cgcgacggtg tcgagcctgc tgacgccgaa ctcgcgcctg ctgctgctgc tggtggcgcc
12781 cttcacggac agcggcagcg tgagccgcga ctcgtacctg ggctacctgc ttaacctgta
12841 ccgcgaggcc atcgggcagg cgcacgtgga cgagcagacc taccaggaga tcacccacgt
12901 gagccgcgcg ctgggccagg aggacccggg caacctggag gccaccctga acttcctgct
12961 gaccaaccgg tcgcagaaga tcccgcccca gtacgcgctg agcaccgagg aggagcgcat
13021 cctgcgctac gtgcagcaga gcgtggggct gttcctgatg caggaggggg ccacgcccag
13081 cgccgcgctc gacatgaccg cgcgcaacat ggagcccagc atgtacgccc gcaaccgccc
13141 gttcatcaat aagctgatgg actacttgca tcgggcggcc gccatgaact cggactactt
13201 taccaacgcc atcttgaacc cgcactggct cccgccgccc gggttctaca cgggcgagta
13261 cgacatgccc gaccccaacg acgggttcct gtgggacgac gtggacagca gcgtgttctc
13321 gccgcgcccc accaccacca ccgtgtggaa gaaagagggc ggggaccggc ggccgtcctc
13381 ggcgctgtcc ggtcgcgcgg gtgctgccgc ggcggtgccc gaggccgcca gccccttccc
13441 gagcctgccc ttttcgctga acagcgtgcg cagcagcgag ctgggtcggc tgacgcggcc
13501 gcgcctgctg ggcgaggagg agtacctgaa cgactccttg cttcggcccg agcgcgagaa
13561 gaacttcccc aataacggga tagagagcct ggtggacaag atgagccgct ggaagacgta
13621 cgcgcacgag cacagggacg agccccgagc tagcagcagc accggcgcca cccgtagacg
13681 ccagcggcac gacaggcagc ggggtctggt gtgggacgat gaggattccg ccgacgacag
13741 cagcgtgttg gacttgggtg ggagtggtgg tggtaacccg ttcgctcacc tgcgcccccg
13801 tatcgggcgc ctgatgtaag aatctgaaaa aataaaagac ggtactcacc aaggccatgg
13861 cgaccagcgt gcgttcttct ctgttgtttg tagtagtatg atgaggcgcg tgtacccgga

FIG. 9D

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13921 gggtcctcct ccctcgtacg agagcgtgat gcagcaggcg gtggcggcgg cgatgcagcc
13981 cccgctggag gcgccttacg tgcccccgcg gtacctggcg cctacggagg ggcggaacag
14041 cattcgttac tcggagctgg cacccttgta cgataccacc cggttgtacc tggtggacaa
14101 caagtcggcg gacatcgcct cgctgaacta ccagaacgac cacagcaact tcctgaccac
14161 cgtggtgcag aacaacgatt tcacccccac ggaggccagc acccagacca tcaactttga
14221 cgagcgctcg cggtggggcg gccagctgaa aaccatcatg cacaccaaca tgcccaacgt
14281 gaacgagttc atgtacagca acaagttcaa ggcgcgggtg atggtctcgc gcaagacccc
14341 caacggggtc acagtaacag atggtagtca ggacgagctg acctacgagt gggtggagtt
14401 tgagctgccc gagggcaact tctcggtgac catgaccatc gatctgatga acaacgccat
14461 catcgacaac tacttggcgg tggggcggca gaacggggtg ctggagagcg acatcggcgt
14521 gaagttcgac acgcgcaact tccggctggg ctgggacccc gtgaccgagc tggtgatgcc
14581 gggcgtgtac accaacgagg ccttccaccc cgacatcgtc ctgctgcccg gctgcggcgt
14641 ggacttcacc gagagccgcc tcagcaacct gctgggcatc cgcaagcggc agcccttcca
14701 ggagggcttc cagatcctgt acgaggacct ggaggggggc aacatccccg cgctgctgga
14761 cgtggacgcc tacgagaaaa gcaaggagga tagcgccgcc gcggcgaccg cagccgtggc
14821 caccgcctct accgaggtgc ggggcgataa tttgctagc gccgcgacac tggcagcggc
14881 cgaggcggct gaaaccgaaa gtaagatagt gatccagccg gtggagaagg acagcaagga
14941 gaggagctac aacgtgctcg cggacaagaa aaacaccgcc taccgcagct ggtacctggc
15001 ctacaactac ggcgaccccg agaagggcgt gcgctcctgg acgctgctca ccacctcgga
15061 cgtcacctgc ggcgtggagc aagtctactg gtcgctgccc gacatgatgc aagacccggt
15121 caccttccgc tccacgcgtc aagttagcaa ctacccggtg gtgggcgccg agctcctgcc
15181 cgtctactcc aagagcttct tcaacgagca ggccgtctac tcgcagcagc tgcgcgcctt
15241 cacctcgctc acgcacgtct tcaaccgctt ccccgagaac cagatcctcg ttcgcccgcc
15301 cgcgcccacc attaccaccg tcagtgaaaa cgttcctgct ctcacagatc acgggaccct
15361 gccgctgcgc agcagtatcc ggggagtcca gcgcgtgacc gtcactgacg ccagacgccg
15421 cacctgcccc tacgtctaca aggccctggg cgtagtcgcg ccgcgcgtcc tctcgagccg
15481 caccttctaa aaaatgtcca ttctcatctc gcccagtaat aacaccggtt ggggcctgcg
15541 cgcgcccagc aagatgtacg gaggcgctcg ccaacgctcc acgcaacacc ccgtgcgcgt
15601 gcgcgggcac ttccgcgctc cctggggcgc cctcaagggc cgcgtgcgct cgcgcaccac
15661 cgtcgacgac gtgatcgacc aggtggtggc cgacgcgcgc aactacacgc ccgccgccgc
15721 gcccgtctcc accgtggacg ccgtcatcga cagcgtggtg gccgacgcgc gccggtacgc
15781 ccgcgccaag agccggcggc ggcgcatcgc ccggcggcac cggagcaccc ccgccatgcg
15841 cgcggcgcga gccttgctgc gcagggccag gcgcacggga cgcagggcca tgctcagggc
15901 ggccagacgc gcggcctccg gcagcagcag cgccggcagg acccgcagac gcgcggccac
15961 ggcggcggcg gcggccatcg ccagcatgtc ccgcccgcgg cgcggcaacg tgtactgggt
16021 gcgcgacgcc gccaccggtg tgcgcgtgcc cgtgcgcacc cgccccctc gcacttgaag
16081 atgctgactt cgcgatgttg atgtgtccca gcggcgagga ggatgtccaa gcgcaaattc
16141 aaggaagaga tgctccaggt catcgcgcct gagatctacg gcccggcggc ggtgaaggag
16201 gaaagaaagc cccgcaaact gaagcgggtc aaaaaggaca aaaaggagga ggaagatgtg
16261 gacggactgg tggagtttgt gcgcgagttc gccccccggc ggcgcgtgca gtggcgcggg
16321 cggaaagtga aaccggtgct gcgacccggc accacggtgg tcttcacgcc cggcgagcgt
16381 tccggctccg cctccaagcg ctcctacgac gaggtgtacg gggacgagga catcctcgag
16441 caggcggccg aacgtctggg cgagtttgct tacggcaagc gcagccgccc cgcgcccttg
16501 aaagaggagg cggtgtccat cccgctggac cacggcaacc ccacgccgag cctgaagccg
16561 gtgaccctgc agcaggtgct gcctggtgcg gcgccgcgcc ggggcttcaa gcgcgagggc
16621 ggcgaggatc tgtacccgac catgcagctg atggtgccca agcgccagaa gctggaggac
16681 gtgctggagc acatgaaggt ggaccccgag gtgcagcccg aggtcaaggt gcggcccatc
16741 aagcaggtgg ccccgggcct gggcgtgcag accgtggaca tcaagatccc cacggagccc
16801 atggaaacgc agaccgagcc cgtgaagccc agcaccagca ccatggaggt gcagacggat
16861 ccctggatgc cggcaccggc ttccaccacc cgccgaagac gcaagtacgg cgcggccagc
16921 ctgctgatgc ccaactacgc gctgcatcct tccatcatcc ccacgccggg ctaccgcggc
16981 acgcgcttct accgcggcta caccagcagc cgccgccgca agaccaccac ccgccgccgc
17041 cgtcgtcgca cccgccgcag cagcaccgcg acttccgccg ccgccctggt gcggagagtg
17101 taccgcagcg ggcgcgagcc tctgaccctg ccgcgcgcgc gctaccaccc gagcatcgcc
17161 atttaactac cgcctcctac ttgcagatat ggccctcaca tgccgcctcc gcgtccccat
17221 tacgggctac cgaggaagaa agccgcgccg tagaaggctg acggggaacg ggctgcgtcg
17281 ccatcaccac cggcggcggc gcgccatcag caagcggttg gggggaggct tcctgcccgc
17341 gctgatgccc atcatcgccg cggcgatcgg ggcgatcccc ggcatagctt ccgtggcggt
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FIG. 9E

17401 gcaggcctct cagcgccact gagacacagc ttggaaaatt tgtaataaaa aatggactga
17461 cgctcctggt cctgtgatgt gtgtttttag atggaagaca tcaatttttc gtccctggca
17521 ccgcgacacg gcacgcggcc gtttatgggc acctggagcg acatcggcaa cagccaactg
17581 aacgggggcg ccttcaattg gagcagtctc tggagcgggc ttaagaattt cgggtccacg
17641 ctcaaaacct atggcaacaa ggcgtggaac agcagcacag ggcaggcgct gagggaaaag
17701 ctgaaagagc agaacttcca gcagaaggtg gtcgatggcc tggcctcggg catcaacggg
17761 gtggtggacc tggccaacca ggccgtgcag aaacagatca acagccgcct ggacgcggtc
17821 ccgcccgcgg ggtccgtgga gatgccccag gtggaggagg agctgcctcc cctggacaag
17881 cgcggcgaca agcgaccgcg tcccgacgcg gaggagacgc tgctgacgca cacggacgag
17941 ccgccccccgt acgaggaggc ggtgaaactg ggtctgccca ccacgcggcc cgtggcgcct
18001 ctggccaccg gggtgctgaa acccagcagc agcagcagcc agcccgcgac cctggacttg
18061 cctccgcctg cttcccgccc ctccacagtg gctaagcccc tgccgccggt ggccgtcgcg
18121 tcgcgcgccc cccgaggccg cccccaggcg aactggcaga gcactctgaa cagcatcgtg
18181 ggtctgggag tgcagagtgt gaagcgccgc cgctgctatt aaaagacact gtagcgctta
18241 acttgcttgt ctgtgtgtat atgtatgtcc gccgaccaga aggaggagga agaggcgcgt
18301 cgccgagttg caagatggcc accccatcga tgctgcccca gtgggcgtac atgcacatcg
18361 ccggacagga cgcttcggag tacctgagtc cgggtctggt gcagttcgcc cgcgccacag
18421 acacctactt cagtctgggg aacaagttta ggaaccccac ggtggcgccc acgcacgatg
18481 tgaccaccga ccgcagccag cggctgacgc tgcgcttcgt gcccgtggac cgcgaggaca
18541 acacctactc gtacaaagtg cgctacacgc tggccgtggg cgacaaccgc gtgctggaca
18601 tggccagcac ctactttgac atccgcggcg tgctggatcg gggccctagc ttcaaaccct
18661 actccggcac cgcttacaac agcctggctc ccaagggagc gcccaacact tgccagtgga
18721 catataaagc tgatggtgat actggtacag aaaaaaccta tacatatgga aatgcgcctg
18781 tgcaaggcat tagtattaca aaagatggta ttcaacttgg aactgacact gatgatcagc
18841 ccatttatgc agataaaact tatcaaccag agcctcaagt gggtgatgct gaatggcatg
18901 acatcactgg tactgatgaa aaatatggag gcagagctct caagcctgac accaaaatga
18961 agccctgcta tggttctttt gccaagccta ccaataaaga aggaggtcag gcaaatgtga
19021 aaaccgaaac aggcggtacc aaagaatatg acattgacat ggcattcttc gataatcgaa
19081 gtgcagctgc ggctggcctg gccccagaaa ttgtttttgta tactgagaat gtggatctgg
19141 aaactccaga tactcatatt gtatacaagg cgggcacaga tgacagcagc tcttctatca
19201 atttgggtca gcagtccatg cccaacagac ccaactacat tggctttaga gacaacttta
19261 tcgggctcat gtactacaac agcactggca acatgggcgt gctggctggt caggcctccc
19321 agctgaatgc tgtggtggac ttgcaggaca gaaacactga actgtcctac cagctcttgc
19381 ttgactctct gggcgacaga accaggtatt tcagtatgtg gaatcaggcg gtggacagct
19441 atgaccccga tgtgcgcatt attgaaaatc acggtgtgga ggatgaactc cctaactatt
19501 gcttcccccct ggatgctgtg ggtagaactg atacttacca gggaattaag gccaatggtg
19561 ctgatcaaac cacctggacc aaagatgata ctgttaatga tgctaatgaa ttgggcaagg
19621 gcaatccttt cgccatggag atcaacatcc aggccaacct gtggcggaac ttcctctacg
19681 cgaacgtggc gctgtacctg cccgactcct acaagtacac gccggccaac atcacgctgc
19741 cgaccaacac caacacctac gattacatga acggccgcgt ggtggcgccc tcgctggtgg
19801 acgcctacat caacatcggg gcgcgctggt cgctggaccc catggacaac gtcaaccccct
19861 tcaaccacca ccgcaacgcg ggcctgcgct accgctccat gctcctgggc aacgggcgct
19921 acgtgccctt ccacatccag gtgccccaaa agttcttcgc catcaagagc ctcctgctcc
19981 tgcccgggtc ctacacctac gagtggaact tccgcaagga cgtcaacatg atcctgcaga
20041 gctccctcgg caacgacctg cgcacggacg gggcctccat cgccttcacc agcatcaacc
20101 tctacgccac cttcttcccc atggcgcaca acaccgcctc cacgctcgag gccatgctgc
20161 gcaacgacac caacgaccag tccttcaacg actacctctc ggcggccaac atgctctacc
20221 ccatcccggc caacgccacc aacgtgccca tctccatccc ctcgcgcaac tgggccgcct
20281 tccgcggatg gtccttcacg cgcctcaaga cccgcgagac gccctcgctc ggctccgggt
20341 tcgaccccta cttcgtctac tcgggctcca tcccctacct cgacggcacc ttctacctca
20401 accacacctt caagaaggtc tccatcacct tcgactcctc cgtcagctgg cccggcaacg
20461 accgcctcct gacgcccaac gagttcgaaa tcaagcgcac cgtcgacgga gaggggtaca
20521 acgtggccca gtgcaacatg accaaggact ggttcctggt ccagatgctg gcccactaca
20581 acatcggcta ccagggcttc tacgtgcccg agggctacaa ggaccgcatg tactccttct
20641 tccgcaactt ccagcccatg agccgccagg tcgtggacga ggtcaactac aaggactacc
20701 aggccgtcac cctggcctac cagcacaaca actcgggctt cgtcggctac ctcgcgccca
20761 ccatgcgcca gggacagccc taccccgcca actacccta cccgctcatc ggcaagagcg
20821 ccgtcgccag cgtcacccag aaaaagttcc tctgcgaccg ggtcatgtgg cgcatccct

FIG. 9F

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20881 tctccagcaa cttcatgtcc atgggcgcgc tcaccgacct cggccagaac atgctctacg
20941 ccaactccgc ccacgcgcta gacatgaatt tcgaagtcga ccccatggat gagtccaccc
21001 ttctctatgt tgtcttcgaa gtcttcgacg tcgtccgagt gcaccagccc caccgcggcg
21061 tcatcgaggc cgtctacctg cgcacgccct tctcggccgg caacgccacc acctaagccc
21121 cgctcttgct tcttgcaaga tgacggcctg tgcgggctcc ggcgagcagg agctcagggc
21181 catcctccgc gacctgggct gcgggccctg cttcctgggc accttcgaca agcgcttccc
21241 gggattcatg gccccgcaca agctggcctg cgccatcgtc aacacggccg gccgcgagac
21301 cgggggcgag cactggctgg ccttcgcctg gaacccgcgc tcccacacct gctacctctt
21361 cgaccccttc gggttctcgg acgagcgcct caagcagatc taccagttcg agtacgaggg
21421 cctgctgcgc cgcagcgccc tggccaccga ggaccgctgc gtcaccctgg aaaagtccac
21481 ccagaccgtg cagggtccgc gctcggccgc ctgcgggctc ttctgctgca tgttcctgca
21541 cgccttcgtg cactggcccg accgccccat ggacaagaac cccaccatga acttgctgac
21601 gggggtgccc aacggcatgc tccagtcgcc ccaggtggaa cccaccctgc gccgcaacca
21661 ggaggcgctc taccgcttcc tcaacgccca ctccgcctac tttcgctccc accgcgcgcg
21721 catcgagaag gccaccgcct tcgaccgcat gaatcaagac atgtaaaccg tgtgtgtatg
21781 tgaatgcttt attcataata aacagcacat gtttatgcca ccttttctga ggctctgact
21841 ttatttagaa atcgaagggg ttctgccggc tctcggcgtg ccccgcgggc agggatacgt
21901 tgcggaactg gtacttgggc agccacttga actcggggat cagcagcttc ggcacgggga
21961 ggtcggggaa cgagtcgctc cacagcttgc gcgtgagttg cagggcgccc agcaggtcgg
22021 gcgcggagat cttgaaatcg cagttgggac ccgcgttctg cgcgcgggag ttgcggtaca
22081 cggggttgca gcactggaac accatcaggg ccgggtgctt cacgctcgcc agcaccgtcg
22141 cgtcggtgat gccctccacg tccagatcct cggcgttggc catcccgaag ggggtcatct
22201 tgcaggtctg ccgccccatg ctgggcacgc agccgggctt gtggttgcaa tcgcagtgca
22261 gggggatcag catcatctgg gcctgctcgg agctcatgcc cgggtacatg gccttcatga
22321 aagcctccag ctggcggaag gcctgctgcg ccttgccgcc ctcggtgaag aagaccccgc
22381 aggacttgct agagaactgg ttggtggcgc agccggcgtc gtgcacgcag cagcgcgcgt
22441 cgttgttggc cagctgcacc acgctgcgcc cccagcggtt ctgggtgatc ttggcccggt
22501 cggggttctc cttcagcgcg cgctgcccgt tctcgctcgc cacatccatc tcgatcgtgt
22561 gctccttctg gatcatcacg gtcccgtgca ggcatcgcag cttgccctcg gcctcggtgc
22621 acccgtgcag ccacagcgcg cagccggtgc actcccagtt cttgtgggcg atctgggagt
22681 gcgagtgcac gaagccctgc aggaagcggc ccatcatcgt ggtcagggtc ttgttgctgg
22741 tgaaggtcag cgggatgccg cggtgctcct cgttcacata caggtggcag atgcggcggt
22801 acacctcgcc ctgctcgggc atcagctgga aggcggactt caggtcgctc tccacgcggt
22861 accggtccat cagcagcgtc atgacttcca tgccctctc ccaggccgag acgatcggca
22921 ggctcagggg gttcttcacc gccgttgtca tcttagtcgc cgccgctgag gtcaggggt
22981 cgttctcgtc cagggtctca aacactcgct tgccgtcctt ctcggtgatg cgcacggggg
23041 gaaagctgaa gcccacggcc gccagctcct cctcggcctg cctttcgtcc tcgctgtcct
23101 ggctgatgtc ttgcaaaggc acatgcttgg tcttgcgggg tttctttttg ggcggcagag
23161 gcggcggcgg agacgtgctg ggcgagcgcg agttctcgct caccacgact atttcttctt
23221 cttggccgtc gtccgagacc acgcggcggt aggcatgcct cttctggggc agaggcggag
23281 gcgacgggct ctcgcggttc ggcgggcggc tggcagagcc ccttccgcgt tcgggggtgc
23341 gctcctggcg gcgctgctct gactgacttc ctccgcggcc ggccattgtg ttctcctagg
23401 gagcaacaag catggagact cagccatcgt cgccaacatc gccatctgcc cccgccgccg
23461 ccgacgagaa ccagcagcag aatgaaagct taaccgcccc gccgcccagc cccacctccg
23521 acgccgccgc ggccccagac atgcaagaga tggaggaatc catcgagatt gacctgggct
23581 acgtgacgcc cgcggagcac gaggaggagc tggcagcgcg cttttcagcc ccggaagaga
23641 accaccaaga gcagccagag caggaagcag agagcgagca gcagcaggct gggctcgagc
23701 atggcgacta cctgagcggg gcagaggacg tgctcatcaa gcatctggcc cgccaatgca
23761 tcatcgtcaa ggacgcgctg ctcgaccgcg ccgaggtgcc cctcagcgtg gcggagctca
23821 gccgcgccta cgagcgcaac ctcttctcgc cgcgcgtgcc ccccaagcgc cagcccaacg
23881 gcacctgcga gcccaacccg cgcctcaact tctacccggt cttcgcggtg cccgaggccc
23941 tggccaccta ccacctcttt ttcaagaacc aaaggatccc cgtctcctgc cgcgccaacc
24001 gcacccgcgc cgacgccctg ctcaacctgg gtcccggcgc ccgcctacct gatatcgcct
24061 ccttggaaga ggttcccaag atcttcgagg gtctgggcag cgacgagact cgggccgcga
24121 acgctctgca aggaagcgga gaggagcatg agcaccacag cgccctggtg gagttggaag
24181 gcgacaacgc gcgcctggcg gtgctcaagc gcacggtcga gctgacccac ttcgcctacc
24241 cggcgctcaa cctgcccccc aaggtcatga gcgccgtcat ggaccaggtg ctcatcaagc
24301 gcgcctcgcc cctctcggat gaggacatgc aggacccgga gagctcggac gagggcaagc
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FIG. 9G

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24361 ccgtggtcag cgacgagcag ctggcgcgct ggctgggagc gagtagcacc ccccagagct
24421 tggaagagcg gcgcaagctc atgatggccg tggtcctggt gaccgtggag ctggagtgtc
24481 tgcgccgctt cttcgccgac gcagagaccc tgcgcaaggt cgaggagaac ctgcactacc
24541 tcttcaggca cgggtttgtg cgccaggcct gcaagatctc caacgtggag ctgaccaacc
24601 tggtctccta catgggcatc ctgcacgaga accgcctggg gcagaacgtg ctgcacacca
24661 ccctgcgcgg ggaggcccgc cgcgactaca tccgcgactg cgtctacctg tacctctgcc
24721 acacctggca gacgggcatg ggcgtgtggc agcagtgcct ggaggagcag aacctgaaag
24781 agctctgcaa gctcctgcag aagaacctga aggccctgtg gaccgggttc gacgagcgca
24841 ccaccgcctc ggacctggcc gacctcatct tccccgagcg cctgcggctg acgctgcgca
24901 acggactgcc cgactttatg agtcaaagca tgttgcaaaa ctttcgctct ttcatcctcg
24961 aacgctccgg gatcctgccc gccacctgct ccgcgctgcc ctcggacttc gtgccgctga
25021 ccttccgcga gtgccccccg ccgctctgga gccactgcta cctgctgcgc ctggccaact
25081 acctggccta ccactcggac gtgatcgagg acgtcagcgg cgagggtctg ctcgagtgcc
25141 actgccgctg caacctctgc acgccgcacc gctccctggc ctgcaacccc cagctgctga
25201 gcgagaccca gatcatcggc accttcgagt tgcaaggccc cggcgagggc aaggggggtc
25261 tgaaactcac cccggggctg tggacctcgg cctacttgcg caagttcgtg cccgaggact
25321 accatccctt cgagatcagg ttctacgagg accaatccca gccgcccaag gccgaactgt
25381 cggcctgcgt catcacccag ggggccatcc tggcccaatt gcaagccatc cagaaatccc
25441 gccaagaatt tctgctgaaa aagggccacg gggtctacct ggacccccag accggagagg
25501 agctcaaccc cagcttcccc caggatgccc cgaggaagca gcaagaagct gaaagtggag
25561 ctgccgccgc cggaggattt ggaggaagac tgggagagca gtcaggcaga ggaggaggag
25621 atggaagact gggacagcac tcaggcagag gaggacagcc tgcaagacag tctggaagac
25681 gaggtggagg aggaggcaga ggaagaagca gccgccgcca gaccgtcgtc ctcggcggag
25741 aaagcaagca gcacggatac catctccgct ccgggtcggg gtcgcggcga ccgggcccac
25801 agtaggtggg acgagaccgg gcgcttcccg aaccccacca cccagaccgg taagaaggag
25861 cggcagggat acaagtcctg gcgggggcac aaaaacgcca tcgtctcctg cttgcaagcc
25921 tgcgggggca acatctcctt cacccgccgc tacctgctct tccaccgcgg ggtgaacttc
25981 ccccgcaaca tcttgcatta ctaccgtcac ctccacagcc cctactactg tttccaagaa
26041 gaggcagaaa cccagcagca gcagaaaacc agcggcagca gcagctagaa aatccacagc
26101 ggcggcaggt ggactgagga tcgcagcgaa cgagccggcg cagacccggg agctgaggaa
26161 ccggatcttt cccaccctct atgccatctt ccagcagagt cgggggcagg agcaggaact
26221 gaaagtcaag aaccgttctc tgcgctcgct cacccgcagt tgtctgtatc acaagagcga
26281 agaccaactt cagcgcactc tcgaggacgc cgaggctctc ttcaacaagt actgcgcgct
26341 cactcttaaa gagtagcccg cgcccgccca cacacggaaa aaggcgggaa ttacgtcacc
26401 acctgcgccc ttcgcccgac catcatcatg agcaaagaga ttcccacgcc ttacatgtgg
26461 agctaccagc cccagatggg cctggccgcc ggcgccgccc aggactactc cacccgcatg
26521 aactggctca gcgccgggcc cgcgatgatc tcacgggtga atgacatccg cgcccgccga
26581 aaccagatac tcctagaaca gtcagcgatc accgccacgc cccgccatca ccttaatccg
26641 cgtaattggc ccgccgccct ggtgtaccag gaaattcccc agcccacgac cgtactactt
26701 ccgcgagacg cccaggccga agtccagctg actaactcag gtgtccagct ggccggcggc
26761 gccgccctgt gtcgtcaccg ccccgctcag ggtataaagc ggctggtgat ccgaggcaga
26821 ggcacacagc tcaacgacga ggtggtgagc tcttcgctgg gtctgcgacc tgacggagtc
26881 ttccaactcg ccggatcggg gagatcttcc ttcacgcctc gtcaggccgt cctgactttg
26941 gagagttcgt cctcgcagcc ccgctcgggt ggcatcggca ctctccagtt cgtggaggag
27001 ttcactccct cggtctactt caacccctte tccggctccc ccggccacta cccggacgag
27061 ttcatcccga acttcgacgc catcagcgag tcggtggacg gctacgattg aatgtcccat
27121 ggtggcgcag ctgacctagc tcggcttcga cacctggacc actgtcgcct ctcctacgag
27181 ctcctgcagc agcgccagaa gttcacctgc ctggtcggag tcaaccccat cgtcatcacc
27241 cagcagtcgg gcgataccaa ggggtgcatc cactgctcct gcgactcccc cgactgcgtc
27301 cacactctga tcaagaccct ctgcggcctc cgcgacctcc tccccatgaa ctaatcaccc
27361 ccttatccag tgaaataaag atcatattga tgatttgagt ttaataaaaa taaagaatca
27421 cttacttgaa atctgatacc aggtctctgt ccatgttttc tgccaacacc acttcactcc
27481 cctcttccca gctctggtac tgcaggcccc ggcgggctgc aaacttcctc cacaccctga
27541 aggggatgtc aaatttcctcc tgtccctcaa tcttcatttt atcttctatc agatgtccaa
27601 aaagcgcgtc cgggtggatg atgacttcga ccccgtctac ccctacgatg cagacaacgc
27661 accgaccgtg ccctttcatca acccccccctt cgtctcttca gatggattcc aagagaagcc
27721 cctgggggtg ctgtttccctgc gtctggccga tcccgtcacc accaagaacg gggaaatcac
27781 cctcaagctg ggagatgggg tggacctcga ctcctcggga aaactcatct ccaacacggc
```

FIG. 9H

```
27841 caccaaggcc gccgcccctc tcagtttttc caacaacacc atttccctta acatggatac
27901 ccctttttac aacaacaatg gaaagttagg catgaaagtc actgctccac tgaagatact
27961 agacacagac ttgctaaaaa cacttgttgt agcttatgga caaggtttag gaacaaacac
28021 cactggtgcc cttgttgccc aactagcatc cccacttgct tttgatagca atagcaaaat
28081 tgcccttaat ttaggcaatg gaccattgaa agtggatgca aatagactga acatcaattg
28141 caatagagga ctctatgtta ctaccacaaa agatgcactg gaagccaata taagttgggc
28201 taatgctatg acatttatag gaaatgccat gggtgtcaat attgatacac aaaaaggctt
28261 gcaatttggc accactagta ccgtcgcaga tgttaaaaac gcttacccca tacaaatcaa
28321 acttggagct ggtctcacat ttgacagcac aggtgcaatt gttgcatgga acaaagatga
28381 tgacaagctt acactatgga ccacagccga cccctctcca aattgtcaca tatattctga
28441 aaaggatgct aagcttacac tttgcttgac aaagtgtggc agtcagattc tgggcactgt
28501 ttccctcata gctgttgata ctggcagttt aaatcccata acaggaacag taaccactgc
28561 tcttgtctca cttaaattcg atgcaaatgg agttttgcaa agcagctcaa cactagactc
28621 agactattgg aatttcagac agggagatgt tacacctgct gaagcctata ctaatgctat
28681 aggtttcatg cccaatctaa aagcataccc taaaaacaca agtggagctg caaaaagtca
28741 cattgttggg aaagtgtacc tacatgggga tacaggcaaa ccactggacc tcattattac
28801 tttcaatgaa acaagtgatg aatcttgcac ttactgtatt aactttcaat ggcagtgggg
28861 ggctgatcaa tataaaaatg aaacacttgc cgtcagttca ttcacctttt cctatattgc
28921 taaagaataa accccactct gtaccccatc tctgtctatg gaaaaaactc tgaaacacaa
28981 aataaaataa agttcaagtg ttttattgat tcaacagttt tacaggattc gagcagttat
29041 ttttcctcca ccctcccagg acatggaata caccaccctc tccccccgca cagccttgaa
29101 catctgaatg ccattggtga tggacatgct tttggtctcc acgttccaca cagtttcaga
29161 gcgagccagt ctcgggtcgg tcagggagat gaaaccctcc gggcactccc gcatctgcac
29221 ctcacagctc aacagctgag gattgtcctc ggtggtcggg atcacggtta tctggaagaa
29281 gcagaagagc ggcggtggga atcatagtcc gcgaacggga tcggccggtg gtgtcgcatc
29341 aggccccgca gcagtcgctg tcgccgccgc tccgtcaagc tgctgctcag ggggtccggg
29401 tccagggact ccctcagcat gatgcccacg gccctcagca tcagtcgtct ggtgcggcgg
29461 gcgcagcagc gcatgcggat ctcgctcagg tcgctgcagt acgtgcaaca caggaccacc
29521 aggttgttca acagtccata gttcaacacg ctccagccga aactcatcgc gggaaggatg
29581 ctacccacgt ggccgtcgta ccagatcctc aggtaaatca agtggcgccc cctccagaac
29641 acgctgccca tgtacatgat ctccttgggc atgtggcggt tcaccacctc ccggtaccac
29701 atcaccctct ggttgaacat gcagccccgg atgatcctgc ggaaccacag ggccagcacc
29761 gccccgcccg ccatgcagcg aagagacccc gggtcccgac aatggcaatg gaggacccac
29821 cgctcgtacc cgtggatcat ctgggagctg aacaagtcta tgttggcaca gcacaggcat
29881 atgctcatgc atctcttcag cactctcagc tcctcggggg tcaaaaccat atcccagggc
29941 acggggaact cttgcaggac agcgaacccc gcagaacagg gcaatcctcg cacataactt
30001 acattgtgca tggacagggt atcgcaatca ggcagcaccg ggtgatcctc caccagagaa
30061 gcgcgggtct cggtctcctc acagcgtggt aaggggccg gccgatacgg gtgatggcgg
30121 gacgcggctg atcgtgttcg cgaccgtgtt atgatgcagt tgctttcgga cattttcgta
30181 cttgctgtag cagaacctgg tccgggcgct gcacaccgat cgccggcggc ggtcccggcg
30241 cttggaacgc tcggtgttga agttgtaaaa cagccactct ctcagaccgt gcagcagatc
30301 tagggcctca ggagtgatga agatcccatc atgcctgatg gctctaatca catcgaccac
30361 cgtggaatgg gccagaccca gccagatgat gcaattttgt tgggtttcgg tgacggcggg
30421 ggagggaaga acaggaagaa ccatgattaa cttttaatcc aaacggtctc ggagcacttc
30481 aaaatgaaga tcgcggagat ggcacctctc gcccccgctg tgttggtgga aaataacagc
30541 caggtcaaag gtgatacggt tctcgagatg ttccacggtg gcttccagca aagcctccac
30601 gcgcacatcc agaaacaaga caatagcgaa agcgggaggg ttctctaatt cctcaatcat
30661 catgttacac tcctgcacca tccccagata attttcattt ttccagcctt gaatgattcg
30721 aactagttcc tgaggtaaat ccaagccagc catgataaag agctcgcgca gagcgccctc
30781 caccggcatt cttaagcaca ccctcataat tccaagatat tctgctcctg gttcacctgc
30841 agcagattga caagcggaat atcaaaatct ctgccgcgat ccctaagctc ctccctcagc
30901 aataactgta agtactcttt catatcctct ccgaaatttt tagccatagg accaccagga
30961 ataagattag ggcaagccac agtacagata aaccgaagtc ctccccagtg agcattgcca
31021 aatgcaagac tgctataagc atgctggcta gacccggtga tatcttccag ataactggac
31081 agaaaatcgc ccaggcaatt tttaagaaaa tcaacaaaag aaaaatcctc caggtgcacg
31141 tttagagcct cgggaacaac gatggagtaa atgcaagcgg tgcgttccag catggttagt
31201 tagctgatct gtagaaaaaa acaaaaatga acattaaacc atgctagcct ggcgaacagg
31261 tgggtaaatc gttctctcca gcaccaggca ggccacgggg tctccggcac gaccctcgta
```

FIG. 9I

31321 aaaattgtcg ctatgattga aaaccatcac agagagacgt tcccggtggc cggcgtgaat
31381 gattcgacaa gatgaataca ccccccggaac attggcgtcc gcgagtgaaa aaaagcgccc
31441 aaggaagcaa taaggcacta caatgctcag tctcaagtcc agcaaagcga tgccatgcgg
31501 atgaagcaca aaattctcag gtgcgtacaa aatgtaatta ctcccctcct gcacaggcag
31561 caaagccccc gatccctcca ggtacacata caaagcctca gcgtccatag cttaccgagc
31621 agcagcacac aacaggcgca agagtcagag aaaggctgag ctctaacctg tccacccgct
31681 ctctgctcaa tatatagccc agatctacac tgacgtaaag gccaaagtct aaaaataccc
31741 gccaaataat cacacacgcc cagcacacgc ccagaaaccg gtgacacact caaaaaaata
31801 cgcgcacttc ctcaaacgcc caaactgccg tcatttccgg gttcccacgc tacgtcatca
31861 aaattcgact ttcaaattcc gtcgaccgtt aaaaacgtcg cccgccccgc ccctaacggt
31921 cgccgctccc gcagccaatc accgccccgc atccccaaat tcaaatacct catttgcata
31981 ttaacgcgca ccaaaagttt gaggtatatt attgatgatg (SEQ ID NO: 5)

FIG. 9J

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   1  ATGAAGCGCA CCAAAACGTC TGACGAGAGC TTCAACCCCG TGTACCCCTA TGACACGGAA
  61  AGCGGCCCTC CCTCCGTCCC TTTCCTCACC CCTCCCTTCG TGTCTCCCGA TGGATTCCAA
 121  GAAAGTCCCC CCGGGGTCCT GTCTCTGAAC CTGGCCGAGC CCCTGGTCAC TTCCCACGGC
 181  ATGCTCGCCC TGAAAATGGG AAGTGGCCTC TCCCTGGACG ACGCTGGCAA CCTCACCTCT
 241  CAAGATATCA CCACCGCTAG CCCTCCCCTC AAAAAAACCA AGACCAACCT CAGCCTAGAA
 301  ACCTCATCCC CCCTAACTGT GAGCACCTCA GGCGCCCTCA CCGTAGCAGC CGCCGCTCCC
 361  CTGGCGGTGG CCGGCACCTC CCTCACCATG CAATCAGAGG CCCCCCTGAC AGTACAGGAT
 421  GCAAAACTCA CCCTGGCCAC CAAAGGCCCC CTGACCGTGT CTGAAGGCAA ACTGGCCTTG
 481  CAAACATCGG CCCCGCTGAC GGCCGCTGAC AGCAGCACCC TCACAGTCAG TGCCACACCA
 541  CCCCTTAGCA CAAGCAATGG CAGCTTGGGT ATTGACATGC AAGCCCCCAT TTACACCACC
 601  AATGGAAAAC TAGGACTTAA CTTTGGCGCT CCCCTGCATG TGGTAGACAG CCTAAATGCA
 661  CTGACTGTAG TTACTGGCCA AGGTCTTACG ATAAACGGAA CAGCCCTACA AACTAGAGTC
 721  TCAGGTGCCC TCAACTATGA CACATCAGGA AACCTAGAAT TGAGAGCTGC AGGGGGTATG
 781  CGAGTTGATG CAAATGGTCA ACTTATCCTT GATGTAGCTT ACCCATTTGA TGCACAAAAC
 841  AATCTCAGCC TTAGGCTTGG ACAGGGACCC CTGTTTGTTA ACTCTGCCCA CAACTTGGAT
 901  GTTAACTACA ACAGAGGCCT CTACCTGTTC ACATCTGGAA ATACCAAAAA GCTAGAAGTT
 961  AATATCAAAA CAGCCAAGGG TCTCATTTAT GATGACACTG CTATAGCAAT CAATGCGGGT
1021  GATGGGCTAC AGTTTGACTC AGGCTCAGAT ACAAATCCAT TAAAAACTAA ACTTGGATTA
1081  GGACTGGATT ATGACTCCAG CAGAGCCATA ATTGCTAAAC TGGGAACTGG CCTAAGCTTT
1141  GACAACACAG GTGCCATCAC AGTAGGCAAC AAAAATGATG ACAAGCTCAC CTTGTGGACC
1201  ACACCAGACC CATCTCCTAA CTGTAGAATC TATTCAGAGA AAGATGCTAA ATTCACACTT
1261  GTTTTGACTA AATGCGGCAG TCAGGTGTTG GCCAGCGTTT CTGTTTTATC TGTAAAAGGT
1321  AGCCTTGCGC CCATCAGTGG CACAGTAACT AGTGCTCAGA TTGTCCTCAG ATTTGATGAA
1381  AATGGAGTTC TACTAAGCAA TTCTTCCCTT GACCCTCAAT ACTGGAACTA CAGAAAAGGT
1441  GACCTTACAG AGGGCACTGC ATATACCAAC GCAGTGGGAT TTATGCCCAA CCTCACAGCA
1501  TACCCAAAAA CACAGAGCCA AACTGCTAAA AGCAACATTG TAAGTCAGGT TTACTTGAAT
1561  GGGGACAAAT CCAAACCCAT GACCCTCACC ATTACCCTCA ATGGAACTAA TGAAACAGGA
1621  GATGCCACAG TAAGCACTTA CTCCATGTCA TTCTCATGGA ACTGGAATGG AAGTAATTAC
1681  ATTAATGAAA CGTTCCAAAC CAACTCCTTC ACCTTCTCCT ACATCGCCCA AGAATAA
(SEQ ID NO: 6)
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FIG. 10

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   1  ATGTCCAAAA AGCGCGTCCG GGTGGATGAT GACTTCGACC CCGTCTACCC CTACGATGCA
  61  GACAACGCAC CGACCGTGCC CTTCATCAAC CCCCCCTTCG TCTCTTCAGA TGGATTCCAA
 121  GAGAAGCCCC TGGGGGTGTT GTCCCTGCGA CTGGCCGACC CCGTCACCAC CAAGAACGGG
 181  GAAATCACCC TCAAGCTGGG AGAGGGGGTG GACCTCGATT CCTCGGGAAA ACTCATCTCC
 241  AACACGGCCA CCAAGGCCGC CGCCCCTCTC AGTTTTTCCA ACAACACCAT TTCCCTTAAC
 301  ATGGATCACC CCTTTTACAC TAAAGATGGA AAATTATCCT TACAAGTTTC TCCACCATTA
 361  AATATACTGA GAACAAGCAT TCTAAACACA CTAGCTTTAG GTTTTGGATC AGGTTTAGGA
 421  CTCCGTGGCT CTGCCTTGGC AGTACAGTTA GTCTCTCCAC TTACATTTGA TACTGATGGA
 481  AACATAAAGC TTACCTTAGA CAGAGGTTTG CATGTTACAA CAGGAGATGC AATTGAAAGC
 541  AACATAAGCT GGGCTAAAGG TTTAAAATTT GAAGATGGAG CCATAGCAAC CAACATTGGA
 601  AATGGGTTAG AGTTTGGAAG CAGTAGTACA GAAACAGGTG TTGATGATGC TTACCCAATC
 661  CAAGTTAAAC TTGGATCTGG CCTTAGCTTT GACAGTACAG GAGCCATAAT GGCTGGTAAC
 721  AAAGAAGACG ATAAACTCAC TTTGTGGACA ACACCTGATC CATCACCAAA CTGTCAAATA
 781  CTCGCAGAAA ATGATGCAAA ACTAACACTT TGCTTGACTA AATGTGGTAG TCAAATACTG
 841  GCCACTGTGT CAGTCTTAGT TGTAGGAAGT GGAAACCTAA ACCCCATTAC TGGCACCGTA
 901  AGCAGTGCTC AGGTGTTTCT ACGTTTTGAT GCAAACGGTG TTCTTTTAAC AGAACATTCT
 961  ACACTAAAAA AATACTGGGG GTATAGGCAG GGAGATAGCA TAGATGGCAC TCCATATACC
1021  AATGCTGTAG GATTCATGCC CAATTTAAAA GCTTATCCAA AGTCACAAAG TTCTACTACT
1081  AAAAATAATA TAGTAGGGCA AGTATACATG AATGGAGATG TTTCAAAACC TATGCTTCTC
1141  ACTATAACCC TCAATGGTAC TGATGACAGC AACAGTACAT ATTCAATGTC ATTTTCATAC
1201  ACCTGGACTA ATGGAAGCTA TGTTGGAGCA ACATTTGGGG CTAACTCTTA TACCTTCTCA
1261  TACATCGCCC AAGAATGA  (SEQ ID NO: 7)
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FIG. 11

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   1  ATGTCCAAAA AGCGCGTCCG GGTGGATGAT GACTTCGACC CCGTCTACCC CTACGATGCA
  61  GACAACGCAC CGACCGTGCC CTTCATCAAC CCCCCCTTCG TCTCTTCAGA TGGATTCCAA
 121  GAGAAGCCCC TGGGGGTGCT GTCCCTGCGT CTGGCCGATC CCGTCACCAC CAAGAACGGG
 181  GAAATCACCC TCAAGCTGGG AGATGGGGTG GACCTCGACG ACTCGGGAAA ACTCATCTCC
 241  AACACGGCCA CCAAGGCCGC CGCCCCTCTC AGTTTTTCCA ACAACACCAT TTCCCTTAAC
 301  ATGGATACCC CTCTTTACAA CAACAATGGA AAGCTAGGTA TGAAGGTAAC CGCACCATTA
 361  AAGATATTAG ACACAGATCT ACTAAAAACA CTTGTTGTTG CTTATGGGCA GGGATTAGGA
 421  ACAAACACCA ATGGTGCTCT TGTTGCCCAA CTAGCATACC CACTTGTTTT TAATACCGCT
 481  AGCAAAATTG CCCTTAATTT AGGCAATGGA CCATTAAAAG TGGATGCAAA TAGACTGAAC
 541  ATTAATTGCA AAAGAGGTAT CTATGTCACT ACCACAAAAG ATGCACTGGA GATTAATATC
 601  AGTTGGGCAA ATGCTATGAC ATTTATAGGA AATGCCATTG GTGTCAATAT TGACACAAAA
 661  AAAGGCCTAC AGTTCGGCAC TTCAAGCACT GAAACAGATG TTAAAAATGC TTTTTCACTC
 721  CAAGTAAAAC TTGGAGCTGG TCTTACATTT GACAGCACAG GTGCCATTGT TGCTTGGAAC
 781  AAAGAAGATG ACAAACTTAC ACTGTTGGACC ACAGCCGATC CATCTCCAAA CTGTCACATA
 841  TATTCTGCAA AGGATGCTAA GCTTACACTC TGCTTGACAA AGTGTGGTAG TCAAATCCTA
 901  GGCACTGTCT CCCTATTAGC AGTCAGTGGC AGCTTGGCTC CTATCACAGG GGCTGTTAGA
 961  ACTGCACTTG TATCACTCAA ATTCAATGCT AATGGAGCCC TTTTGGACAA ATCAACTCTG
1021  AACAAAGAAT ACTGGAACTA CAGACAAGGA GATCTAATTC CAGGTACACC ATATACACAT
1081  GCTGTGGGTT TCATGCCTAA CAAAAAAGCC TACCCTAAAA ACACAACTGC AGCTTCCAAG
1141  AGCCACATTG TGGGTGATGT GTATTTAGAT GGAGATGCAG ATAAACCTTT ATCTCTTATC
1201  ATCACTTTCA ATGAAACTGA TGATGAAACC TGTGATTACT GCATCAACTT TCAATGGAAA
1261  TGGGGAGCTG ATCAATATAA GGATAAGACA CTCGCAACCA GTTCATTCAC CTTCTCATAC
1321 ATCGCCCAAG AATAA  (SEQ ID NO: 8)
```

FIG. 12

```
   1  ATGTCCAAAA AGCGCGTCCG GGTGGATGAT GACTTCGACC CCGTCTACCC CTACGATGCA
  61  GACAACGCAC CGACCGTGCC CTTCATCAAC CCCCCCTTCG TCTCTTCAGA TGGATTCCAA
 121  GAGAAGCCCC TGGGGGTGCT GTCCCTGCGA CTGGCCGACC CCGTCACCAC CAAGAACGGG
 181  GAAATCACCC TCAAGCTGGG AGAGGGGGTG GACCTCGACT CCTCGGGAAA ACTCATCTCC
 241  AACACGGCCA CCAAGGCCGC CGCCCCTCTC AGTTTTTCCA ACAACACCAT TTCCCTTAAC
 301  ATGGATACCC CTTTTTACAA CAATAATGGA AAGTTAGGCA TGAAAGTCAC TGCTCCACTG
 361  AAGATACTCG ACACAGACTT GCTAAAAACA CTTGTTGTAG CTTATGGACA AGGTTTAGGA
 421  ACAAACACCA CTGGTGCCCT TGTTGCCCAA CTAGCAGCCC CACTTGCTTT TGATAGCAAT
 481  AGCAAAATTG CCCTTAATTT AGGCAATGGA CCATTGAAAG TGGATGCAAA TAGACTGAAC
 541  ATCAATTGCA ATAGAGGACT CTATGTTACT ACCACAAAAG ATGCACTGGA AACCAACATA
 601  AGTTGGGCTA ATGCTATGAC ATTTATAGGA AATGCCATGG GTGTCAATAT TGATACACAA
 661  AAAGGCTTGC AATTTGGCAC CACTAGTACC GTCGCAGATG TTAAAAACGC TTACCCCATA
 721  CAAGTCAAAC TGGGAGCTGG TCTCACATTT GACAGCACAG GTGCAATTGT CGCTTGGAAC
 781  AAAGAAGATG ACAAACTTAC ACTGTTGGACC ACAGCCGATC CATCTCCAAA CTGTCACATA
 841  TATTCTGACA AGGATGCTAA GCTTACACTC TGCTTGACAA AGTGTGGCAG TCAGATACTG
 901  GGCACTGTTT CTCTCATAGC TGTTGATACT GGTAGCTTAA ATCCAATAAC AGGACAAGTA
 961  ACCACTGCTC TTGTTTCACT TAAATTCGAT GCCAATGGAG TTTTGCAAAC CAGTTCAACA
1021  TTGGACAAAG AATATTGGAA TTTTAGAAAA GGAGATGTGA CACCTGCTGA GCCATATACT
1081  AATGCTATAG GTTTCATGCC CAATCTAAAG GCATACCCTA AAAACACAAG TGGAGCTGCA
1141  AAAAGTCACA TTGTTGGGAA AGTGTTACCTA CATGGGGATA CAGACAAACC ACTGGACCTG
1201  ATTATTACTT TCAATGAAAC AAGTGATGAA TCTTGCACTT ACTGTATTAA CTTTCAATGG
1261  AAATGGGATA GTACTAAGTA CACAGGTGAA ACACTTGCTA CAAGCTCCTT CACCTTCTCC
1321  TACATTGCCC AAGAATGA  (SEQ ID NO: 9)
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FIG. 13

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   1  ATGTCCAAAA AGCGCGTCCG GGTGGATGAT GACTTCGACC CCGTCTACCC CTACGATGCA
  61  GACAACGCAC CGACCGTGCC CTTCATCAAC CCCCCCTTCG TCTCTTCAGA TGGATTCCAA
 121  GAGAAGCCCC TGGGGGTGTT GTCCCTGCGA CTGGCCGACC CCGTCACCAC CAAGAACGGG
 181  GAAATCACCC TCAAGCTGGG AGAGGGGGTG GACCTCGACT CCTCGGGAAA ACTCATCTCC
 241  AACACGGCCA CCAAGGCCGC TGCCCCTCTC AGTTTTTCCA ACAACACCAT TTCCCTTAAC
 301  ATGGATCACC CCTTTTACAC TAAAGATGGA AAATTAGCCT TACAAGTTTC TCCACCATTA
 361  AATATACTGA GAACAAGCAT TCTAAACACA CTAGCTTTAG GTTTTGGATC AGGTTTAGGA
 421  CTCCGTGGCT CTGCCTTGGC AGTACAGTTA GTCTCTCCAC TTACATTTGA TACTGATGGA
 481  AACATAAAGC TTACCTTAGA CAGAGGTTTG CATGTTACAA CAGGAGATGC AATTGAAAGC
 541  AACATAAGCT GGGCTAAAGG TTTAAAATTT GAAGATGGAG CCATAGCAAC CAACATTGGA
 601  AATGGGTTAG AGTTTGGAAG CAGTAGTACA GAAACAGGTG TCGATGATGC TTACCCAATC
 661  CAAGTTAAAC TTGGATCTGG CCTTAGCTTT GACAGTACAG GAGCCATAAT GGCTGGTAAC
 721  AAAGAAGACG ATAAACTCAC TTTGTGGACA ACACCTGATC CATCACCAAA CTGTCAAATA
 781  CTCGCAGAAA ATGATGCAAA ACTAACACTT TGCTTGACTA AATGTGGTAG TCAAATACTG
 841  GCCACTGTGT CAGTCTTAGT TGTAGGAAGT GGAGACCTAA ACCCCATTAC TGGCACCGTA
 901  AGCAGTGCTC AGGTGTTTCT ACGTTTTGAT GCAAACGGTG TTCTTTTAAC AGAACATTCT
 961  ACACTAAAAA AATACTGGGG GTATAGGCAG GGAGATAGCA TAGATGGCAC TCCATATGCC
1021  AATGCTGTAG GATTCATGCC CAATTTAAAA GCTTATCCAA AGTCACAAAG TTCTACTACT
1081  AAAAATAATA TAGTAGGGCA AGTATACATG AATGGAGATG TTTCAAAACC TATGCTTCTC
1141  ACTATAACCC TCAATGGTAC TGATGACAGC AACAGTACAT ATTCAATGTC ATTTTCATAC
1201  ACCTGGACTA ATGGAAGCTA TGTTGGAGCA ACATTTGGAG CTAACTCTTA TACCTTCTCC
1261  TACATCGCCC AAGAATGA  (SEQ ID NO: 10)
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FIG. 14

```
   1  ATGTCCAAAA AGCGCGTCCG GGTGGAATGAT GACTTCGACC CCGTCTACCC CTACGATGCA
  61  GACAACGCAC CGACCGTGCC CTTCATCAAC CCCCCCTTCG TCTCTTCAGA TGGATTCCAA
 121  GAGAAGCCCC TGGGGGTGCT GTCCCTGCGA CTGGCCGACC CCGTCACCAC CAAGAACGGG
 181  GAAATCACCC TCAAGCTGGG AGAGGGGGTG GACCTCGACT CCTCGGGAAA ACTCATCTCC
 241  AACACGGCCA CCAAGGCCGC CGCCCCTCTC AGTTTTTCCA ACAACACCAT TTCCCTTAAC
 301  ATGGATCACC CCTTTTACAC TAAAGATGGA AAATTATCCT TACAAGTTTC TCCACCATTA
 361  AATATACTGA GAACAAGCAT TCTAAACACA CTAGCTTTAG GTTTTGGATC AGGTTTAGGA
 421  CTCCGTGGCT CTGCCTTGGC AGTACAGTTA GTCTCTCCAC TTACATTTGA TACTGATGGA
 481  AACATAAAGC TTACCTTAGA CAGAGGTTTG CATGTTACAA CAGGAGATGC AATTGAAAGC
 541  AACATAAGCT GGGCTAAAGG TTTAAAATTT GAAGATGGAG CCATAGCAAC CAACATTGGA
 601  AATGGGTTAG AGTTTGGAAG CAGTAGTACA GAAACAGGTG TTGATGATGC TTACCCAATC
 661  CAAGTTAAAC TTGGATCTGG CCTTAGCTTT GACAGTACAG GAGCCATAAT GGCTGGTAAC
 721  AAAGAAGACG ATAAACTCAC TTTGTGGACA ACACCTGATC CATCGCCAAA CTGTCAAATA
 781  CTCGCAGAAA ATGATGCAAA ACTAACACTT TGCTTGACTA AATGTGGTAG TCAAATACTG
 841  GCCACTGTGT CAGTCTTAGT TGTAGGAAGT GGAAACCTAA ACCCCATTAC TGGCACCGTA
 901  AGCAGTGCTC AGGTGTTTCT ACGTTTTGAT GCAAACGGTG TTCTTTTAAC AGAACATTCT
 961  ACACTAAAAA AATACTGGGG GTATAGGCAG GGAGATAGCA TAGATGGCAC TCCATATACC
1021  AATGCTGTAG GATTCATGCC CAATTTAAAA GCTTATCCAA AGTCACAAAG TTCTACTACT
1081  AAAAATAATA TAGTAGGGCA AGTATACATG AATGGAGATG TTTCAAAACC TATGCTTCTC
1141  ACTATAACCC TCAATGGTAC TGATGACAGC AACAGTACAT ATTCAATGTC ATTTTCATAC
1201  ACCTGGACTA ATGGAAGCTA TGTTGGAGCA ACATTTGGGG CTAACTCTTA TACCTTCTCA
1261  TACATCGCCC AAGAATGA  (SEQ ID NO: 11)
```

FIG. 15

```
   1  ATGAAGCGCA CCAAAACGTC TGACGAGAGC TTCAACCCCG TGTACCCCTA TGACACGGAA
  61  AACGGTCCTC CCTCCGTCCC TTTCCTCACC CCTCCCTTCG TGTCTCCCGA TGGATTCCAA
 121  GAGAGCCCCC CCGGGGTCCT GTCTCTGAAC CTGGCCGAGC CCCTGGTCAC TTCCCACGGC
 181  ATGCTCGCCC TGAAAATGGG AAGTGGCCTC TCCCTGGACG ACGCCGGCAA CCTCACCTCT
 241  CAAGATGTCA CCACCACTAC CCCTCCCCTG AAAAAAACCA AGACCAACCT CAGCCTAGAA
 301  ACCTCAGCCC CCCTGACTGT GAGCACCTCA GGCGCCCTCA CCCTAGCAGC CGCCGTTCCC
 361  CTGGCGGTGG CCGGCACCTC CCTCACCATG CAATCAGAGG CCCCCCTGAC AGTCCAAGAT
 421  GCAAAACTCA CCCTGGCCAC CAAGGGCCCC CTGACCGTGT CTGAAGGCAA ACTAGCCTTG
 481  CAGACCTCGG CCCCGCTGAC GGCCGCTGAC AGCAGCACCC TCACAATCAG CGCCACACCG
 541  CCCCTTAGCA CAAGCAATGG CAGCTTGGGT ATTGACATGC AAGCCCCCAT TTACACTACT
 601  AACGGAAAAC TGGGACTTAA CTTTGGTGCT CCCCTGCATG TGGTAGACAG CCTAAATGCA
 661  CTGACTGTAG TGACTGGCCA AGGTCTTACG ATAAACGGTA CAGCCCTACA AACTAGAGTC
 721  TCAGGTGCCC TCAACTATGA CTCATCAGGA AACCTAGAAT TGAGAGCTGC AGGGGGTATG
 781  CGAGTTGATG CAAATGGCAA ACTTATCCTT GACGTAGCTT ACCCATTTGA TGCTCAAAAC
 841  AACCTCAGCC TTAGACTTGG ACAGGGACCC CTGTTTGTTA ACTCTGCCCA CAACTTGGAT
 901  GTTAACTACA ACAGAGGCCT CTACCTGTTC ACATCTGGAA ATACCAAAAA GCTAGAAGTT
 961  AATATCAAAA CAGCCAAAGG CCTCATTTAT GATGACACTG CTATAGCAAT CAATCCAGGC
1021  GATGGGCTAG AGTTTGGCTC AGGCTCAGAT ACAAATCCAT TAAAAACTAA ACTTGGATTG
1081  GGACTAGAGT ATGACTCCAG CAGAGCCATA ATTGCTAAGC TGGGAACCGG CCTAAGCTTT
1141  GACAACACAG GTGCCATCAC AGTGGGCAAC AAAAATGATG ACAAGCTTAC CTTGTGGACC
1201  ACACCAGACC CCTCTCCCAA CTGTAGAATT TATTCAGAAA AAGATGCTAA ATTTACACTA
1261  GTTTTAACTA AATGCGGCAG TCAGGTGTTG GCCAGCGTTT CTGTTTTATC TGTAAAAGGC
1321  AGCCTTGCGC CCATCAGTGG CACAGTAACT AGCGCTCAGA TTATTCTCAG ATTTGATGAA
1381  AATGGAGTTC TACTAAGCAA TTCTTCTCTT GACCCCCAAT ACTGGAACTA CAGAAAAGGT
1441  GACCTTACAG AGGGCACTGC ATATACCAAC GCAGTGGGAT TTATGCCCAA CCTCACAGCA
1501  TACCCAAAAA CACAGAGTCA AACTGCTAAA AGCAACATTG TAAGCCAGGT TTACTTGAAT
1561  GGGGACAAAT CCAAACCCAT GATCCTCACC ATTACCCTCA ATGGAACTAA TGAAACAGGG
1621  GATGCTACAG TTAGCACTTA CTCCATGTCA TTCTCATGGA ATTGGAATGG AAGTAATTAC
1681  ATTAATGAAA CGTTCCAAAC CAACTCTTTC ACCTTCTCCT ACATCGCCCA AGAATAA
 (SEQ ID NO: 12)
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FIG. 16

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   1  ATGTCCAAAA AGCGCGTCCG GGTGGATGAT GACTTCGACC CCGTCTACCC CTACGATGCA
  61  GACAACGCAC CGACCGTGCC CTTCATCAAC CCCCCCTTCG TCTCTTCAGA TGGATTCCAA
 121  GAGAAGCCCC TGGGGGTGCT GTCCCTGCGA CTGGCTGACC CCGTCACCAC CAAGAACGGG
 181  GAAATCACCC TCAAGCTGGG AGAGGGGGTG GACCTCGACT CCTCGGGAAA ACTCATCTCC
 241  AACACGGCCA CCAAGGCCGC CGCCCCTCTC AGTTTTTCCA ACAACACCAT TTCCCTTAAC
 301  ATGGATACCC CTTTTTACAC CAAAGATGGA AAATTAACCA TGCAGGTCAC TGCACCACTA
 361  AAGTTAGCAA ACACAGCCAT ATTGAACACA CTAGCTATGG CATATGGAAA TGGATTAGGT
 421  CTAAGCAACA ACGCTCTTAC CGTTCAGTTA CAATCTCCAC TCACCTTTAA CAACAGCAAG
 481  GTTGCAATCA ACCTGGGAAA TGGACCACTA AATGTAACAT CAAACAGACT TAGCATTAAT
 541  TGCAAGAGGG GTGTCTATGT CACCACCACA GGAGATGCAA TTGAAACCAA CATAAGTTGG
 601  TCAAATGCTA TTAAATTTAT AGGAAATGCC ATGGGTGTCA ACATTGATAC AAACAAAGGC
 661  TTGCAATTTG GCACCACCAG CACTGTCACA GATGTGACCA ATGCTTTCCC CATACAAGTC
 721  AAACTTGGGG CTGGTCTTGC ATTTGATAGC ACTGGAGCTA TTGTTGCATG GAACAAAGAG
 781  GATGACAGTC TCACTTTGTG GACTACACCA GATCCATCTC CAAATTGCAA GATAGCATCT
 841  GACAAAGATG CTAAACTCAC ACTTTGCTTG ACAAAATGTG GTAGTCAGAT ACTGGGCACT
 901  GTCTCCTTGT TAGCTGTGAG TGGCAGTTTA GCTCCTATCA CTGGAGCTGT GAGCACTGCA
 961  CTTGTATCAC TTAAATTCGA TGCCAATGGA GCACTCTTGG AAAAATCAAC CCTAAACAGA
1021  GAATATTGGA ACTATAGACA AGGAGATCTT ATTCCAGGTA CGCCATATAC TCACGCAGTA
1081  GGTTTCATGC CCAACAAGAA AGCCTACCCT AAAAACACAA CTGCAGCTTC CAAAAGCCAC
1141  ATTGTGGGAG AAGTCTATCT AGACGGAGAT GCAGATAAGC CCCTATCTCT CATAATCACT
1201  TTTAATGAAA CTGATGATGA ATCATGTGAC TATTGCATGA ACTTTCAATG GAAATGGGGT
1261  GCTGATCAAT ACAAGGACAA AACACTCGCT ACCAGCTCCT TCACCTTCTC CTACATTGCC
1321  CAAGAATGA  (SEQ ID NO: 13)
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FIG. 17

```
   1  ATGAAGCGCA CCAAAACGTC TGACGAGAGC TTCAACCCCG TGTACCCCTA TGACACGGAA
  61  AGCGGCCCTC CCTCCGTCCC TTTCCTCACC CCTCCCTTCG TGTCTCCCGA TGGATTCCAA
 121  GAAAGCCCCC CCGGGGTCCT GTCTCTGAAC CTGGCCGAGC CCCTGGTCAC TTCCCACGGC
 181  ATGCTTGCCC TGAAAATGGG AAGTGGCCTC TCCCTGGACG ACGCTGGCAA CCTTACCTCT
 241  CAAGATATTA CCTCCACTAC CCCTCCCCTC AAAAAAACCA AGACCAACCT CAGCCTAGAA
 301  ACCTCATCCC CCCTAACTGT AAGCACCTCA GGCGCCCTCA CCGTAGCAGC CGCCGCTCCC
 361  CTGGCGGTGG CCGGCACCTC CCTCACCATG CAATCAGAGG CCCCCCTGGC AGTACAGGAT
 421  GCAAAACTCA CCCTGGCCAC CAAAGGCCCC CTGACCGTGT CTGAAGGCAA ACTGGCCTTG
 481  CAAACATCGG CCCCGCTGAC GGCCGCTGAC AGCAGCACCC TCACCGTTAG CTCCACTCCA
 541  CCAATTAGTG TAAGCAGTGG AAGTTTGGGC TTGGACATGG AAGACCCCAT GTATACTCAC
 601  GATGGAAAAC TGGGAATAAG AATTGGGGGT CCACTAAGAG TAGTAGACAG CTTGCACACA
 661  CTCACTGTAG TTACCGGAAA TGGACTAACT GTAGATAACA ATGCCCTCCA AACTAGAGTT
 721  ACGGGCGCCC TAGGTTATGA CACATCAGGA AATCTACAAC TGAGAGCCGC AGGGGGTATG
 781  CGAATTGATG CAAATGGCCA ACTTATCCTT GATGTGGCAT ACCCATTTGA TGCTCAAAAC
 841  AATCTCAGCC TTAGACTTGG TCAGGGACCC CTGTATGTAA ATACAGACCA CAACCTGGAT
 901  TTAAATTGCA ACAGAGGTCT AACCACAACT ACCACCAACA ACACAAAAAA ACTTGAGACT
 961  AAAATTAGCT CAGGCTTAGA CTATGACACC AATGGTGCTG TCATTATTAA ACTTGGCACT
1021  GGTCTAAGCT TCGACAACAC AGGCGCCCTA ACTGTGGGAA ACACTGGTGA TGATAAACTG
1081  ACTCTGTGGA CGACCCCAGA CCCATCTCCA AATTGCAGAA TTCACTCAGA CAAAGACTGC
1141  AAGTTTACTC TCGTCCTAAC TAAGTGTGGA AGCCAAATCC TGGCCTCTGT CGCCGCCCTA
1201  GCGGTATCAG GAAATCTGGC TTCGATAACA GGCACCGTTG CCAGCGTTAC CATCTTTCTT
1261  AGATTTGATC AGAATGGAGT GCTTATGGAA AACTCCTCAC TAGACAAGCA GTACTGGAAC
1321  TTCAGAAATG GCAATTCAAC TAATGCTGCC CCCTACACCA ACGCAGTTGG GTTCATGCCA
1381  AACCTCGCAG CGTACCCCAA AACGCAAAGC CAGACTGCTA AAAACAACAT TGTAAGTCAG
1441  GTTTACTTGA ATGGAGACAA ATCCAAACCC ATGACCCTTA CCATCACCCT CAATGGAACT
1501  AATGAATCCA GTGAAACTAG TCAGGTGAGT CACTACTCCA TGTCATTTAC ATGGGCTTGG
1561  GAAAGCGGGC AATATGCCAC TGAAACCTTT GCCACCAACT CCTTCACCTT TTCTTACATT
1621  GCTGAACAAT AA  (SEQ ID NO: 14)
```

FIG. 18

```
   1  ATGAAGCGCA CCAAAACGTC TGACAAGAGC TTCAACCCCG TGTACCCCTA TGACACGGAA
  61  AACGGTCCTC CCTCCGTCCC TTTCCTCACC CCTCCCTTCG TGTCTCCCGA TGGATTCCAA
 121  GAGAGCCCCC CCGGGGTCCT GTCTCTGAAC CTGGCCGAGC CCCTGGTCAC TTCCCACGGC
 181  ATGCTCGCCC TGAAAATGGG AAGTGGCCTC TCCCTGGACG ACGCCGGCAA CCTCACCTCT
 241  CAAGATGTCA CCACCACTAC CCCTCCCCTG AAAAAAACCA AGACCAACCT CAGCCTAGAA
 301  ACCTCAGCCC CCCTGACTGT GAGCACCTCA GGCGCCCTCA CCCTAGCAGC CGCCGCCCCC
 361  CTGGCGGTGG CCGGCACCTC CCTCACCATG CAATCAGAGG CCCCCCTGAC AGTCCAAGAT
 421  GCAAAACTCA CCCTGGCCAC CAAGGGCCCC CTGACCGTGT CTGAAGGCAA ACTGGCCTTG
 481  CAGACCTCGG CCCCGCTGAC GGCCGCTGAC AGCAGCACCC TCACCGTTAG CGCCACACCA
 541  CCCATCAGTG TAAGCAGTGG AAGTTTGGGC TTAGACATGG AAGACCCAAT GTATACTCAT
 601  GATGGAAAAC TGGGAATAAG AATTGGGGGC CCACTGAGAG TAGTAGACAG CCTGCACACA
 661  CTGACTGTAG TTACCGGAAA TGGAATAGCT GTAGATAACA ATGCCCTCCA AACTAGAGTT
 721  ACGGGCGCCC TGGGTTATGA CACATCAGGA AACCTACAAC TGAGAGCCGC GGGGGGTATG
 781  CGAATTGATG CAAATGGCCA ACTTATCCTT GATGTGGCAT ACCCATTTGA TGCTCAAAAC
 841  AATCTCAGCC TTAGACTTGG TCAGGGACCC CTGTATGTAA ACACAGACCA CAACCTAGAT
 901  TTGAATTGCA ACAGAGGTCT GACCACAACT ACCACCAACA ACACAAAAAA ACTTGAAACT
 961  AAAATTGGCT CAGGCTTAGA CTATGATACC AATGGTGCTG TTATTATTAA ACTTGGCACT
1021  GGTGTCAGCT TTGACAGCAC AGGTGCCCTA AGTGTGGGAA ACACTGGCGA TGATAAACTG
1081  ACTCTGTGGA CAACCCCAGA CCCATCTCCA AATTGCAGAA TTCACTCAGA CAAAGACTGC
1141  AAGTTTACTC TAGTCCTAAC TAAGTGTGGA AGTCAAATCC TGGCTTCTGT CGCCGCCCTA
1201  GCGGTGTCAG GAAATCTGGC TTCAATAACA GGCACCGTTT CCAGCGTTAC CATCTTTCTC
1261  AGATTTGATC AGAATGGAGT GCTTATGGAA AACTCCTCGC TAGACAAGCA GTACTGGAAC
1321  TTCAGAAATG GTAATTCAAC CAATGCCACC CCCTACACCA ATGCAGTTGG GTTTATGCCA
1381  AACCTCGCAG CATACCCCAA GACACAGAGC CAGACTGCAA AAAACAACAT TGTAAGTCAG
1441  GTTTACTTGA ATGGGGACAA ATCCAAACCC ATGACCCTTA CCATTACCCT CAATGGAACT
1501  AATGAATCCA GTGAAACTAG CCAGGTGAGT CACTACTCCA TGTCATTTAC GTGGGCTTGG
1561  GAGAGTGGGC AATATGCCAC CGAAACCTTT GCCACCAATT CCTTTACCTT CTCTTACATT
1621  GCTGAACAAT AA  (SEQ ID NO: 15)
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FIG. 19

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                                                                                                    100
1
C1      MAKRTRLSSS .FNPVYPYED EN..SSHPFI NPGFISPNGF TQSPDGVLTL NCVAPLTTAN GALDIKVGGG LKVNSTDGFL EENIN..... ..........
CV68    MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
PAN5    MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGDG VDLDSSGKLI SNTAT..... ..........
PAN6    MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
PAN7    MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD3   MKRTKTSDES .FNPVYPYDT ESGPPSVPFL TPPFVSPDGF QESPPGVLSL NLAEPLVTSH GMLALKMGSG LSLDDAGNLT SQDITTASPP LKKTKTNLSL
CHAD4   MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD5   MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGDG VDLDDSGKLI SNTAT..... ..........
CHAD6   MSKKRARVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GAVTLKLGEG VDLDDSGKLI SKNAT..... ..........
CHAD7   MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD8   MT.KRVRLSS SFNPVYPYED ES.SSQHPFI NPGFISSNGF TQSPDGVLTL KCLSPLTTTG GSLQLKVGGG LSVDDTDGSL EENIS..... ..........
CHAD9   MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD10  MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD11  MKRTKTSDES .FNPVYPYDT ENGPPSVPFL TPPFVSPDGF QESPPGVLSL NLAEPLVTSH GMLALKMGSG LSLDDAGNLT SQDVTTTTPP LKKTKTNLSL
CHAD16  MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD17  MKRTKTSDES .FNPVYPYDT ESGPPSVPFL TPPFVSPDGF QESPPGVLSL NLAEPLVTSH GMLALKMGSG LSLDDAGNLT SQDITSTTPP LKKTKTNLSL
CHAD19  MKRTKTSDKS .FNPVYPYDT ENGPPSVPFL TPPFVSPDGF QESPPGVLSL NLAEPLVTSH GMLALKMGSG LSLDDAGNLT SQDVTTTTPP LKKTKTNLSL
CHAD20  MKRTKTSDES .FNPVYPYDT ESGPPSVPFL TPPFVSPDGF QESPPGVLSL NLAEPLVTSH GMLALKMGSG LSLDDAGNLT SQDITTASPP LKKTKTNLSL
CHAD22  MA.KRARLSS SFNPVYPYED ES.SSQHPFI NPGFISSNGF AQSPDGVLTL KCVNPLTTAS GPLQLKVGSS LTVDNIDGSL EENIT..... ..........
CHAD24  MKRTKTSDES .FNPVYPYDT ENGPPSVPFL TPPFVSPDGF QESPPGVLSL NLAEPLVTSH GMLALKMGSG LSLDDAGNLT SQDVTTTTPP LKKTKTNLSL
CHAD26  MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGDG VDLDDSGKLI SNTAT..... ..........
CHAD30  MA.KRARLSS SFNPVYPYED ES.SSQHPFI NPGFISSNGF AQSPDGVLTL KCVNPLTTAS GPLQLKVGSS LTVDTIDGSL EENIT..... ..........
CHAD31  MKRTKTSDES .FNPVYPYDT ESGPPSVPFL TPPFVSPDGF QESPPGVLSL NLAEPLVTSH GMLALKMGSG LSLDDAGNLT SQDITTASPP LKKTKTNLSL
CHAD37  MA.KRARLSS SFNPVYPYED ES.SSQHPFI NPGFISPDGF TQSPDGVLTL KCVSPLTTTS GALDIKVGRG LKVDSTDGSL EENID..... ..........
CHAD38  MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD44  MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD63  MSKKRVRVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GEITLKLGEG VDLDSSGKLI SNTAT..... ..........
CHAD82  MSKKRARVDD DFDPVYPYDA DN.APTVPFI NPPFVSSDGF QEKPLGVLSL RLADPVTTKN GAVTLKLGEG VDLDDSGKLI SKNAT..... ..........
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FIG. 20A

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                201                                                
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601
C1      IREDD
CV68    IAQE.
PAN5    IAKE.
PAN6    IAQE.
PAN7    IAQE.
CHAD3   IAEQ.
CHAD4   IAQE.
CHAD5   IAQE.
CHAD6   IAKE.
CHAD7   IAQE.
CHAD8   IREDD
CHAD9   IAQE.
CHAD10  IAQE.
CHAD11  IAQE.
CHAD16  IAQE.
CHAD17  IAEQ.
CHAD19  IAEQ.
CHAD20  IAQE.
CHAD22  IREDD
CHAD24  IAEQ.
CHAD26  IAQE.
CHAD30  IREDD
CHAD31  IAQE.
CHAD37  IREDD
CHAD38  IAQE.
CHAD44  IAQE.
CHAD63  IAQE.
CHAD82  IAKE.
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FIG. 20G

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   1  ATGGCGACCC CATCGATGAT GCCGCAGTGG TCGTACATGC ACATCTCGGG CCAGGACGCC
  61  TCGGAGTACC TGAGCCCCGG GCTGGTGCAG TTCGCCCGCG CCACCGAGAG CTACTTCAGC
 121  CTGAGTAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGG
 181  TCTCAGCGCC TGACGCTGCG GTTCATTCCC GTGGACCGCG AGGACACCGC GTACTCGTAC
 241  AAGGCGCGGT TCACCCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CTCCACCTAC
 301  TTTGACATCC GCGGGGTGCT GGACCGGGGT CCCACTTTCA AGCCCTACTC TGGCACCGCC
 361  TACAACTCCC TGGCCCCCAA GGGCGCTCCC AACCCATGCG AGTGGGATGA GGCTGCTACT
 421  GCCCTTGACA TTGATTTGAA CGCAGAAGAC GATGAAGAAA GCGACGAAGC TCAAGGGGAA
 481  GCAGATCAGC AGAAAACTCA TGTATTTGGC CAGGCGCCCT ACTCCGGACA GAACATTACA
 541  AAAGAAGGCA TACAGATAGG CATAGATGCT GCCAGTCAAG CCCAGACACC TGTATATGCC
 601  GATAAAACAT TCCAACCAGA ACCTCAAGTT GGAGAATCAC AGTGGAATGA GACAGAGATT
 661  AGTTATGGAG CGGGACGGGT GCTTAAAAAA ACCACTCTCA TGAAACCTTG CTATGGGTCG
 721  TATGCAAGGC CTACTAATGA GAACGGAGGT CAGGGCATCC TCTTGGAACA AGATGGAAAG
 781  AAAGAAAGTC AAGTGGAAAT GCAATTTTTC TCTACTACTC AGGCAGCCGC GGGTAATTCA
 841  GATAATCCTA CCCCAAAGGT TGTTTTGTAC AGCGAGGATG TTAACCTGGA AACACCAGAT
 901  ACACACATTT CATACATGCC CACCAACAAC GAGACAAATT CAAGAGAGCT TTTGGGACAA
 961  CAGGCCATGC CCAACAGGCC TAATTACATT GGCTTCAGAG ACAACTTTAT CGGTCTCATG
1021  TATTACAACA GCACTGGCAA CATGGGAGTG CTTGCAGGTC AGGCCTCTCA GTTGAACGCA
1081  GTGGTGGACT TGCAAGACAG AAACACAGAA CTGTCATACC AGCTCTTGCT TGATTCCATG
1141  GGTGACAGAA CCAGATACTT TTCCATGTGG AATCAGGCAG TGGACAGTTA TGACCCAGAT
1201  GTCAGAATTA TTGAAAATCA TGGAACTGAA GACGAGCTCC CCAACTATTG TTTCCCTCTG
1261  GGCGGCGTAA TCAATACGGA AACTTTCACA AAAGTAAAAC CTAAAGCTGC ACAGGACGCT
1321  CAGTGGGAAA AAGATTCAGA ATTTTCAGAT AAAAATGAAA TAAGGGTGGG AAACAACTTC
1381  GCCATGGAAA TTAACCTCAA TGCCAATCTG TGGAGGAACT TTTTGTACTC CAACGTAGCC
1441  CTCTACTTGC CTGACAAGCT TAAGTATACT CCATCCAATG TGCAAATTTC CAACAATCCC
1501  AACTCCTACG ATTACATGAA CAAGCGAGTG GTGGCCCCGG GGCTGGTGGA CTGCTACATC
1561  AACCTGGGCG CGCGCTGGTC GCTGGACTAC ATGGACAACG TCAACCCCTT CAACCACCAC
1621  CGCAATGCGG GCCTGCGCTA CCGCTCCATG CTCCTGGGCA ACGGGCGCTA CGTGCCCTTC
1681  CACATCCAGG TGCCCCAGAA GTTCTTTGCC ATCAAGAACC TCCTCCTCCT GCCGGGCTCC
1741  TACACCTACG AGTGGAACTT CAGGAAGGAT GTCAACATGG TCCTCCAGAG CTCTCTGGGT
1801  AACGATCTCA GGGTGGACGG GGCCAGCATC AAGTTCGAGA GCATCTGCCT CTACGCCACC
1861  TTCTTCCCCA TGGCCCACAA CACGGCCTCC ACGCTCGAGG CCATGCTCAG GAACGACACC
1921  AACGACCAGT CCTTCAATGA CTACCTTTCC GCCGCCAACA TGCTCTACCC CATACCCGCC
1981  AACGCCACCA ACGTCCCCAT CTCCATCCCC TCGCGCAACT GGGCGGCCTT CCGCGGCTGG
2041  GCCTTCACCC GCCTCAAGAC CAAGGAGACC CCCTCCCTGG GCTCGGGATT CGACCCCTAC
2101  TACACCTACT CGGGCTCCAT TCCCTACCTG GACGGCACCT TCTACCTCAA CCACACTTTC
2161  AAGAAGGTCT CGGTCACCTT CGACTCCTCG GTCAGCTGGC CGGGCAACGA CCGTCTGCTC
2221  ACCCCCAACG AGTTCGAGAT CAAGCGCTCG GTCGACGGGG AGGGCTACAA CGTGGCCCAG
2281  TGCAACATGA CCAAGGACTG GTTCCTGGTC CAGATGCTGG CCAACTACAA CATCGGCTAC
2341  CAGGGCTTCT ACATCCCAGA GAGCTACAAG GACAGGATGT ACTCCTTCTT CAGGAACTTC
2401  CAGCCCATGA GCCGGCAGGT GGTGGACCAG ACCAAGTACA AGGACTACCA GGAGGTGGGC
2461  ATCATCCACC AGCACAACAA CTCGGGCTTC GTGGGCTACC TCGCCCCCAC CATGCGCGAG
2521  GGACAGGCCT ACCCCGCCAA CTTCCCCTAC CCGCTCATAG GCAAGACCGC GGTCGACAGC
2581  ATCACCCAGA AAAAGTTCCT CTGCGACCGC ACCCTCTGGC GCATCCCCTT CTCCAGCAAC
2641  TTCATGTCCA TGGGTGCGCT CTCGGACCTG GGCCAGAACT TGCTCTACGC CAACTCCGCC
2701  CACGCCCTCG ACATGACCTT CGAGGTCGAC CCCATGGACG AGCCCACCCT TCTCTATGTT
2761  CTGTTCGAAG TCTTTGACGT GGTCCGGGTC CACCAGCCGC ACCGCGGCGT CATCGAGACC
2821  GTGTACCTGC GTACGCCCTT CTCGGCCGGC AACGCCACCA CCTAA (SEQ ID NO: 16)
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FIG. 21

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   1  ATGGCCACCC CATCGATGCT GCCCCAGTGG GCGTACATGC ACATCGCCGG ACAGGACGCT
  61  TCGGAGTACC TGAGTCCGGG TCTGGTGCAG TTCGCCCGCG CCACAGACAC CTACTTCAGT
 121  CTGGGGAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGC
 181  AGCCAGCGGC TGACGCTGCG CTTCGTGCCC GTGGACCGCG AGGACAACAC CTACTCGTAC
 241  AAAGTGCGCT ACACGCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CAGCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGATCGGGGC CCTAGCTTCA AACCCTACTC CGGCACCGCC
 361  TACAACAGCC TGGCTCCCAA GGGAGCGCCC AATTCCAGCC AGTGGGAGCA AAAAAAGACT
 421  GGCAATAATG CCAATGGAGA TACGGAGAAT GTCACTTATG GTGTAGCTGC CATGGGAGGA
 481  ATTGACATCG ATAAAAATGG CCTTCAAATT GGAACCGATG ACACCAAAGA TGACGATAAT
 541  GAAATTTATG CAGACAAAAC ATATCAGCCT GAGCCGCAAA TAGGAGAGGA AAACTGGCAA
 601  GAAACATATT CCTACTATGG AGGTAGAGCT CTTAAAAAAG ATACCAAAAT GAAGCCATGC
 661  TATGGCTCAT TTGCCAGACC TACCAATGTG AAAGGAGGAC AGGCAAAAAT AAAAACAGAT
 721  GGAGATGTTA AGTCATTTGA CATAGACCTA GCCTTCTTTG ATATTCCCAA TTCTGGCGCG
 781  GGAAATGGCA CAAATGTTAA CGATGATCCA GATATGGTTA TGTATACAGA AAATGTAAAT
 841  CTGGAAACCC CAGATACTCA TATTGTGTAC AAACCAGGAA CTTCAGATGA CAGCTCAAAG
 901  GTCAACTTGT GTCAGCAATC CATGCCTAAC AGACCCAATT ATATTGGCTT CAGAGACAAT
 961  TTTATTGGGC TTATGTACTA CAACAGCACT GGCAATATGG GTGTGCTGGC TGGTCAGGCC
1021  TCTCAACTGA ATGCCGTGGT GGACTTGCAA GACAGAAACA CAGAGCTGTC CTACCAGCTC
1081  TTGCTTGACT CTCTGGGTGA CAGAACCAGG TATTTCAGTA TGTGGAATCA GGCGGTGGAC
1141  AGTTATGATC CTGATGTGCG CATTATTGAA AACCATGGTG TGGAGGATGA ATTGCCAAAC
1201  TATTGCTTCC CCTTGGATGG AGCAGGCACC AATTCGGTTT ACCAAGGTGT TAAACCAAAA
1261  ACTGACAATG GCAACGATCA GTGGGAAACA GATTCCACAG TTTCAAGTCA CAATCAGATA
1321  TGCAAAGGCA ATATCTATGC CATGGAGATC AACCTCCAGG CCAACCTGTG GAGAAGTTTT
1381  CTCTACTCGA ACGTGGCCCT GTACCTGCCC GATTCTTACA AGTACACGCC GGCCAACATC
1441  ACCCTGCCCA CCAACACCAA CACCTACGAT TACATGAACG GGAGAGTGGT GCCTCCCTCG
1501  CTGGTGGACG CCTACATCAA CATCGGGGCG CGCTGGTCGC TGGACCCCAT GGACAACGTG
1561  AATCCCTTCA ACCACCACCG CAACGCGGGC CTGCGCTACC GCTCCATGCT CCTGGGCAAC
1621  GGGCGCTACG TGCCCTTCCA CATCCAGGTG CCCCAGAAAT TTTTCGCCAT CAAGAGCCTC
1681  CTGCTCCTGC CCGGGTCCTA CACCTACGAG TGGAACTTCC GCAAGGACGT CAACATGATC
1741  CTGCAGAGCT CCCTCGGCAA CGACCTGCGC ACGGACGGGG CCTCCATCTC CTTCACCAGC
1801  ATCAACCTCT ACGCCACCTT CTTCCCCATG GCGCACAACA CGGCCTCCAC GCTCGAGGCC
1861  ATGCTGCGCA ACGACACCAA CGACCAGTCC TTCAACGACT ACCTCTCGGC GGCCAACATG
1921  CTCTACCCCA TCCCGGCCAA CGCCACCAAC GTGCCCATCT CCATCCCCTC GCGCAACTGG
1981  GCCGCCTTCC GCGGCTGGTC CTTCACGCGC CTCAAGACCC GCGAGACGCC CTCGCTGGGC
2041  TCCGGGTTCG ACCCCTACTT CGTCTACTCG GGCTCCATCC CCTACCTCGA CGGCACCTTC
2101  TACCTCAACC ACACCTTCAA GAAGGTCTCC ATCACCTTCG ACTCCTCCGT CAGCTGGCCC
2161  GGCAACGACC GCCTCCTGAC GCCCAACGAG TTCGAAATCA AGCGCACCGT CGACGGAGAG
2221  GGATACAACG TGGCCCAGTG CAACATGACC AAGGACTGGT TCCTGGTCCA GATGCTGGCC
2281  CACTACAACA TCGGCTACCA GGGCTTCTAC GTGCCCGAGG GCTACAAGGA CCGCATGTAC
2341  TCCTTCTTCC GCAACTTCCA GCCCATGAGC CGCCAGGTGG TGGACGAGGT CAACTACAAG
2401  GACTACCAGG CCGTCACCCT GGCCTACCAG CACAACAACT CGGGCTTCGT CGGCTACCTC
2461  GCGCCCACCA TGCGCCAGGG CCAGCCCTAC CCCGCCAACT ACCCGTACCC GCTCATCGGA
2521  AAGAGCGCCG TCACCAGCGT CACCCAGAAA AAGTTCCTCT GCGACAGGGT CATGTGGCGC
2581  ATCCCCTTCT CCAGCAACTT CATGTCCATG GGCGCGCTCA CCGACCTCGG CCAGAACATG
2641  CTCTATGCCA ACTCCGCCCA CGCGCTAGAC ATGAATTTCG AAGTCGACCC CATGGATGAG
2701  TCCACCCTTC TCTATGTTGT CTTCGAAGTC TTCGACGTCG TCCGAGTGCA CCAGCCCCAC
2761  CGCGGCGTCA TCGAGGCCGT CTACCTGCGC ACCCCCTTCT CGGCCGGTAA CGCCACCACC
2821  TAA  (SEQ ID NO: 17)
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FIG. 22

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   1  ATGGCCACCC CATCGATGCT GCCCCAGTGG GCGTACATGC ACATCGCCGG ACAGGACGCT
  61  TCGGAGTACC TGAGTCCGGG TCTGGTGCAG TTCGCCCGCG CCACAGACAC CTACTTCAGT
 121  CTGGGGAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGC
 181  AGCCAGCGGC TGACGCTGCG CTTCGTGCCC GTGGACCGCG AGGACAACAC CTACTCGTAC
 241  AAAGTGCGCT ACACGCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CAGCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGATCGGGGC CCTAGCTTCA AACCCTACTC CGGCACCGCC
 361  TACAACAGCC TGGCTCCCAA GGGAGCGCCC AATTCCAGCC AGTGGGAGCA AAAAAAGACT
 421  GGCAATAATG CCAATGGAGA TACGGAGAAT GTCACTTATG GTGTAGCTGC CATGGGAGGA
 481  ATTGACATCG ATAAAAATGG CCTTCAAATT GGAACCGATG ACACCAAAGA TGACGATAAT
 541  GAAATTTATG CAGACAAAAC ATATCAGCCT GAGCCGCAAA TAGGAGAGGA AAACTGGCAA
 601  GAAACATATT CCTACTATGG AGGTAGAGCT CTTAAAAAAG ATACCAAAAT GAAGCCATGC
 661  TATGGCTCAT TTGCCAGACC TACCAATGTG AAAGGAGGAC AGGCAAAAAT AAAAACAGAT
 721  GGAGATGTTA AGTCATTTGA CATAGACCTA GCCTTCTTTG ATATTCCCAA TTCTGGCGCG
 781  GGAAATGGCA CAAATGTTAA CGATGATCCA GATATGGTTA TGTATACAGA AAATGTAAAT
 841  CTGGAAACCC CAGATACTCA TATTGTGTAC AAACCAGGAA CTTCAGATGA CAGCTCAAAG
 901  GTCAACTTGT GTCAGCAATC CATGCCTAAC AGACCCAATT ATATTGGCTT CAGAGACAAT
 961  TTTATTGGGC TTATGTACTA CAACAGCACT GGCAATATGG GTGTGCTGGC TGGTCAGGCC
1021  TCTCAACTGA ATGCCGTGGT GGACTTGCAA GACAGAAACA CAGAGCTGTC CTACCAGCTC
1081  TTGCTTGACT CTCTGGGTGA CAGAACCAGG TATTTCAGTA TGTGGAATCA GGCGGTGGAC
1141  AGTTATGATC CTGATGTGCG CATTATTGAA AACCATGGTG TGGAGGATGA ATTGCCAAAC
1201  TATTGCTTCC CCTTGGATGG AGCAGGCACC AATTCGGTTT ACCAAGGTGT TAAACCAAAA
1261  ACTGACAATG GCAACGATCA GTGGGAAACA GATTCCACAG TTTCAAGTCA CAATCAGATA
1321  TGCAAAGGCA ATATCTATGC CATGGAGATC AACCTCCAGG CCAACCTGTG GAGAAGTTTT
1381  CTCTACTCGA ACGTGGCCCT GTACCTGCCC GATTCTTACA AGTACACGCC GGCCAACATC
1441  ACCCTGCCCA CCAACACCAA CACCTACGAT TACATGAACG GGAGAGTGGT GCCTCCCTCG
1501  CTGGTGGACG CCTACATCAA CATCGGGGCG CGCTGGTCGC TGGACCCCAT GGACAACGTG
1561  AATCCCTTCA ACCACCACCG CAACGCGGGC CTGCGCTACC GCTCCATGCT CCTGGGCAAC
1621  GGGCGCTACG TGCCCTTCCA CATCCAGGTG CCCCAGAAAT TTTTTGCCAT CAAGAGCCTC
1681  CTGCTCCTGC CCGGGTCCTA CACCTACGAG TGGAACTTCC GCAAGGACGT CAACATGATC
1741  CTGCAGAGCT CCCTCGGCAA CGACCTGCGC ACGGACGGGG CCTCCATCTC CTTCACCAGC
1801  ATCAACCTCT ACGCCACCTT CTTCCCCATG GCGCACAACA CGGCCTCCAC GCTCGAGGCC
1861  ATGCTGCGCA ACGACACCAA CGACCAGTCC TTCAACGACT ACCTCTCGGC GGCCAACATG
1921  CTCTACCCCA TCCCGGCCAA CGCCACCAAC GTGCCCATCT CCATCCCCTC GCGCAACTGG
1981  GCCGCCTTCC GCGGCTGGTC CTTCACGCGC CTCAAGACCC GCGAGACGCC CTCGCTGGGC
2041  TCCGGGTTCG ACCCCTACTT CGTCTACTCG GGCTCCATCC CCTACCTCGA CGGCACCTTC
2101  TACCTCAACC ACACCTTCAA GAAGGTCTCC ATCACCTTCG ACTCCTCCGT CAGCTGGCCC
2161  GGCAACGACC GCCTCCTGAC GCCCAACGAG TTCGAAATCA AGCGCACCGT CGACGGAGAG
2221  GGATACAACG TGGCCCAGTG CAACATGACC AAGGACTGGT TCCTGGTCCA GATGCTGGCC
2281  CACTACAACA TCGGCTACCA GGGCTTCTAC GTGCCCGAGG GCTACAAGGA CCGCATGTAC
2341  TCCTTCTTCC GCAACTTCCA GCCCATGAGC CGCCAGGTCG TGGACGAGGT CAACTACAAG
2401  GACTACCAGG CCGTCACCCT GGCCTACCAG CACAACAACT CGGGCTTCGT CGGCTACCTC
2461  GCGCCCACCA TGCGCCAGGG CCAGCCCTAC CCCGCCAACT ACCCCTACCC GCTCATCGGC
2521  AAGAGCGCCG TCGCCAGCGT CACCCAGAAA AAGTTCCTCT GCGACCGGGT CATGTGGCGC
2581  ATCCCCTTCT CCAGCAACTT CATGTCCATG GGCGCGCTCA CCGACCTCGG CCAGAACATG
2641  CTCTACGCCA ACTCCGCCCA CGCGCTAGAC ATGAATTTCG AAGTCGACCC CATGGATGAG
2701  TCCACCCTTC TCTATGTTGT CTTCGAAGTC TTCGACGTCG TCCGAGTGCA CCAGCCCCAC
2761  CGCGGCGTCA TCGAGGCCGT CTACCTGCGC ACCCCCTTCT CGGCCGGTAA AGCCACCACC
2821  TAA  (SEQ ID NO: 18)
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FIG. 23

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   1  ATGGCCACCC CATCGATGCT GCCCCAGTGG GCGTACATGC ACATCGCCGG ACAGGACGCT
  61  TCGGAGTACC TGAGTCCGGG TCTGGTGCAG TTCGCCCGCG CCACAGACAC CTACTTCAGT
 121  CTGGGGAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGC
 181  AGCCAGCGGC TGACGCTGCG CTTCGTGCCC GTGGACCGCG AGGACAACAC CTACTCGTAC
 241  AAAGTGCGCT ACACGCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CAGCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGACCGGGGC CCTAGCTTCA AACCTTACTC CGGCACCGCT
 361  TACAACAGCC TGGCCCCCAA GGGAGCACCC AATTCCAGCC AGTGGGAGCA AAAAAAGACT
 421  GGCAAAAATG CCAATGGAGA TACGGAGAAT GTCACTTATG GTGTAGCTGC CATGGGAGGA
 481  ATTGACATCG ATAAAAATGG CCTTCAAATT GGAACCGATG ACACCAAAGA TGGCGATAAT
 541  GAAATTTATG CAGACAAAAC ATATCAGCCT GAGCCGCAAA TAGGAGAGGA AAACTGGCAA
 601  GAAACATATT CCTACTATGG AGGTAGAGCT CTTAAAAAAG ATACCAAAAT GAAGCCATGC
 661  TATGGCTCAT TTGCTAGACC TACCAATGTG AAAGGAGGAC AGGCAAAAAT AAAAACAGAT
 721  GGAGATGTTA AGTCATTTGA CATAGACCTA GCCTTCTTTG ATATTCCAAA TTCTGGCGCG
 781  GGAAATGGCA CAAATGTTAA CGATGATCCA GATATGGTTA TGTATACAGA AAATGTAAAT
 841  CTGGAAACCC CAGATACTCA TATTGTGTAC AAACCAGGAA CTTCAGATGA CAGCTCCGAG
 901  GTCAACTTGT GTCAGCAATC CATGCCTAAC AGACCCAATT ATATTGGCTT CAGAGACAAT
 961  TTTATTGGGC TTATGTACTA CAACAGCACT GGCAATATGG GTGTGCTGGC TGGTCAGGCC
1021  TCTCAACTGA ATGCCGTGGT GGACTTGCAA GACAGAAACA CAGAGCTGTC CTACCAGCTC
1081  TTGCTTGACT CTCTGGGTGA CAGAACCAGG TATTTCAGTA TGTGGAATCA GGCGGTGGAC
1141  AGTTATGATC CTGATGTGCG CATTATTGAA AACCATGGTG TGGAGGATGA ATTGCCAAAC
1201  TATTGCTTCC CCTTGGATGG AGCAGGCACC AATTCGGTTT ACCAAGGTGT TAAACCAAAA
1261  ACTGACAATG GCAACGATCA GTGGGAAACA GATTCCACAG TTTCAAGTCA CAATCAGATA
1321  TGCAAAGGCA ATATCTATGC CATGGAGATC AATCTCCAGG CCAACCTGTG GAGAAGTTTC
1381  CTCTACTCGA ACGTGGCCCT GTACCTGCCC GATTCTTACA AGTACACGCC GGCCAACATC
1441  ACCCTGCCCA CCAACACCAA CACCTACGAT TACATGAACG GGAGAGTGGT GCCTCCCTCG
1501  CTGGTGGATG CCTACATCAA CATCGGAGCG CGCTGGTCGC TGGACCCCAT GGACAACGTC
1561  AATCCCTTCA ACCACCACCG CAATGCGGGG CTGCGCTACC GCTCCATGCT CCTGGGCAAC
1621  GGGCGCTACG TGCCCTTCCA CATCCAGGTG CCCCAGAAAT TTTTCGCCAT CAAGAGCCTT
1681  CTGCTCCTGC CCGGGTCCTA CACCTACGAG TGGAACTTCC GCAAGGACGT CAACATGATC
1741  CTGCAGAGCT CCCTCGGCAA CGACCTGCGC ACGGACGGGG CCTCCATCTC CTTCACCAGC
1801  ATCAACCTCT ACGCCACCTT CTTCCCCATG GCGCACAACA CGGCCTCCAC GCTCGAGGCC
1861  ATGCTGCGCA ACGACACCAA CGACCAGTCC TTCAACGACT ACCTCTCGGC GGCCAACATG
1921  CTCTACCCCA TCCCGGCCAA CGCCACCAAC GTGCCCATCT CCATCCCCTC GCGCAACTGG
1981  GCCGCCTTCC GCGGCTGGTC CTTCACGCGC CTCAAGACCA AGGAGACGCC CTCGCTGGGC
2041  TCCGGGTTCG ACCCATACTT CGTCTACTCG GGCTCCATCC CCTACCTCGA CGGCACCTTC
2101  TACCTCAACC ACACCTTCAA GAAGGTCTCC ATCACCTTCG ATTCCTCCGT CAGCTGGCCC
2161  GGCAACGACC GGCTCCTGAC GCCCAACGAG TTCGAAATCA AGCGCACCGT CGACGGCGAG
2221  GGATACAACG TGGCCCAGTG CAACATGACC AAGGACTGGT TCCTGGTCCA GATGCTGGCC
2281  CACTACAACA TCGGCTACCA GGGCTTCTAC GTGCCCGAGG GCTACAAGGA CCGCATGTAC
2341  TCCTTCTTCC GCAACTTCCA GCCCATGAGC CGCCAGGTGG TGGACGAGGT CAACTACAAG
2401  GACTACCAGG CCGTCACCCT GGCCTACCAG CACAACAACT CGGGCTTCGT CGGCTACCTC
2461  GCGCCCACCA TGCGCCAGGG CCAGCCCTAC CCCGCCAACT ACCCGTACCC GCTCATCGGC
2521  AAGAGCGCCG TCACCAGCGT CACCCAGAAA AAGTTCCTCT GCGACAGGGT CATGTGGCGC
2581  ATCCCCTTCT CCAGCAACTT CATGTCCATG GGCGCGCTCA CCGACCTCGG GCAGAACATG
2641  CTCTATGCCA ACTCCGCCCA CGCGCTAGAC ATGAATTTCG AAGTCGACCC CATGGATGAG
2701  TCCACCCTTC TCTATGTTGT CTTCGAAGTC TTCGACGTCG TCCGAGTGCA CCAGCCCCAC
2761  CGCGGCGTCA TCGAGGCCGT CTACCTGCGC ACCCCCTTCT CGGCCGGTAA CGCCACCACC
2821  TAA (SEQ ID NO: 19)
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FIG. 24

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   1  ATGGCCACCC CATCGATGCT GCCCCAGTGG GCGTACATGC ACATCGCCGG ACAGGACGCT
  61  TCGGAGTACC TGAGTCCGGG TCTGGTGCAG TTCGCCCGCG CCACAGACAC CTACTTCAGT
 121  CTGGGGAACA AGTTTAGGAA CCCCACGGTG GCACCCACGC ACGATGTGAC CACCGACCGC
 181  AGCCAGCGGC TGACGCTGCG CTTCGTGCCC GTGGACCGCG AGGACAACAC CTACTCGTAC
 241  AAAGTGCGCT ACACGCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CAGCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGATCGGGGC CCTAGCTTCA AACCCTACTC CGGCACCGCC
 361  TACAACAGCC TGGCTCCCAA GGGAGCGCCC AACACTTGCC AGTGGACATA TACTGATAAC
 421  CAAACTGAGA AAACAGCCAC ATATGGAAAT GCACCCGTAG AGGGCATTAA CATTACAAAA
 481  GATGGCATTC AACTTGGAAC TGACAGCGAT GGTCAGGCAA TCTATGCAGA CGAAACTTAT
 541  CAGCCCGAAC CTCAGGTGGG AGATCCTGAA TGGCATGATA CCACAGGTAC AGAAGAAAAA
 601  TATGGAGGCA GAGCGCTTAA ACCTGCCACC GACATGAAAC CTTGCTATGG CTCTTTTGCC
 661  AAGCCAACTA ATGTTAAGGG AGGTCAGGCC AAAAGCAGAA CAAAAACTGA TGGAACAACT
 721  GAGCCTGATA TTGACATGGC CTTTTTTGAT GGCAGAAATG CAACAACAGC TGGTTTGACT
 781  CCAGAAATTG TTTTGTATAC TGAAAATGTG GATCTGGAAA CTCCAGATAC CCATATTGTA
 841  TACAAGGCAG GCACAGATGA CAGCAGCTCT TCTATCAATT TGGGTCAGCA GTCCATGCCC
 901  AACAGACCCA ACTACATTGG CTTCAGAGAC AACTTTATCG GGCTCATGTA CTACAACAGC
 961  ACTGGCAATA TGGGTGTACT GGCTGGACAG GCCTCCCAGC TGAATGCTGT GGTGGACTTG
1021  CAGGACAGAA ACACTGAACT GTCCTACCAG CTCTTGCTTG ACTCTCTGGG TGACAGAACC
1081  AGGTATTTCA GTATGTGGAA TCAGGCGGTG GACAGTTATG ACCCCGATGT GCGCATTATT
1141  GAAAATCACG GTGTGGAGGA TGAACTCCCC AACTATTGCT TCCCCCTGAA TGCTGTGGGT
1201  AGAACAAATA GTTATCAGGG AATTAAACCC AATGGAGGCG ATCCAGCTAC ATGGGCCAAA
1261  GATGAAAGCG TCAATGATTC TAATGAATTG GGCAAGGGCA ATCCTTTCGC CATGGAGATC
1321  AACATCCAGG CCAACCTGTG GCGGAACTTC CTCTACGCGA ACGTGGCGCT GTACCTGCCC
1381  GACTCCTACA AGTACACGCC GGCCAACATC ACGCTGCCCG CCAACACCAA CACCTACGAT
1441  TACATGAACG GCCGCGTGGT GGCGCCCTCG CTGGTGGACG CCTACATCAA CATCGGGGCG
1501  CGCTGGTCGC TGGACCCCAT GGACAACGTC AACCCCTTCA ACCACCACCG CAACGCGGGC
1561  CTGCGCTACC GCTCCATGCT CCTGGGCAAC GGGCGCTACG TGCCCTTCCA CATCCAGGTG
1621  CCCCAAAAGT TTTTCGCCAT CAAGAGCCTC CTGCTCCTGC CCGGGTCCTA CACCTACGAG
1681  TGGAACTTCC GCAAGGACGT CAACATGATC CTGCAGAGCT CCCTCGGCAA CGACCTGCGC
1741  ACGGACGGGG CCTCCATCGC CTTCACCAGC ATCAACCTCT ACGCCACCTT CTTCCCCATG
1801  GCGCACAACA CCGCCTCCAC GCTCGAGGCC ATGCTGCGCA ACGACACCAA CGACCAGTCC
1861  TTCAACGACT ACCTCTCGGC GGCCAACATG CTCTACCCCA TCCCGGCCAA CGCCACCAAC
1921  GTGCCCATCT CCATCCCCTC GCGCAACTGG GCCGCCTTCC GCGGATGGTC CTTCACGCGC
1981  CTCAAGACCC GCGAGACGCC CTCGCTAGGC TCCGGGTTCG ACCCCTACTT CGTCTACTCG
2041  GGCTCCATCC CCTACCTCGA CGGCACCTTC TACCTCAACC ACACCTTCAA GAAGGTCTCC
2101  ATCACCTTCG ACTCCTCCGT CAGCTGGCCC GGCAACGACC GCCTCCTGAC GCCCAACGAG
2161  TTCGAAATCA AGCGCACCGT CGACGGAGAG GGATACAACG TGGCCCAGTG CAACATGACC
2221  AAGGACTGGT TCCTGGTCCA GATGCTGGCC CACTACAACA TCGGCTACCA GGGCTTCTAC
2281  GTGCCCGAGG GCTACAAGGA CCGCATGTAC TCCTTCTTCC GCAACTTCCA GCCCATGAGC
2341  CGCCAGGTCG TGGACGAGGT CAACTACAAG GACTACCAGG CCGTCACCCT GGCCTACCAG
2401  CACAACAACT CGGGCTTCGT CGGCTACCTC GCGCCCACCA TGCGCCAGGG CCAGCCCTAC
2461  CCCGCCAACT ACCCCTACCC GCTCATCGGC AAGAGCGCCG TCGCCAGCGT CACCCAGAAA
2521  AAGTTCCTCT GCGACCGGGT CATGTGGCGC ATCCCCTTCT CCAGCAACTT CATGTCCATG
2581  GGCGCGCTCA CCGACCTCGG CCAGAACATG CTCTACGCCA ACTCCGCCCA CGCGCTAGAC
2641  ATGAATTTCG AAGTCGACCC CATGGATGAG TCCACCCTTC TCTATGTTGT CTTCGAAGTC
2701  TTCGACGTCG TCCGAGTGCA CCAGCCCCAC CGCGGCGTCA TCGAGGCCGT CTACCTGCGC
2761  ACGCCCTTCT CGGCCGGCAA CGCCACCACC TAA  (SEQ ID NO: 20)
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FIG. 25

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   1  ATGGCCACCC CATCGATGCT GCCCCAGTGG GCGTACATGC ACATCGCCGG ACAGGACGCT
  61  TCGGAGTACC TGAGTCCGGG TCTGGTGCAG TTCGCCCGCG CCACAGACAC CTACTTCAGT
 121  CTGGGGAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGC
 181  AGCCAGCGGC TGACGCTGCG CTTCGTGCCC GTGGACCGCG AGGACAACAC CTACTCGTAC
 241  AAAGTGCGCT ACACGCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CAGCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGATCGGGGC CCTAGCTTCA AACCCTACTC CGGCACCGCC
 361  TACAACAGCC TGGCTCCCAA GGGAGCGCCC AACACTTGCC AGTGGACATA TACTGATAAC
 421  CAAACTGAGA AAACAGCCAC ATATGGAAAT GCGCCTGTGC AAGGCATTAG TATTACAAAA
 481  GATGGTATTC AACTTGGAAC TGACACTGAT GATCAGCCCA TTTATGCAGA TAAAACTTAT
 541  CAACCAGAGC CTCAAGTGGG TGATGCTGAA TGGCATGACA TCACTGGTAC TGATGAAAAA
 601  TATGGAGGCA GAGCTCTCAA GCCTGACACC AAAATGAAGC CCTGCTATGG TTCTTTTGCC
 661  AAGCCTACCA ATAAAGAAGG AGGTCAGGCA AATGTGAAAA CCGAAACAGG CGGTACCAAA
 721  GAATATGACA TTGACATGGC ATTCTTCGAT AATCGAAGTG CAGCTGCGGC TGGCCTGGCC
 781  CCAGAAATTG TTTTGTATAC TGAGAATGTG GATCTGGAAA CTCCAGATAC TCATATTGTA
 841  TACAAGGCAG GCACAGATGA CAGCAGCTCT TCTATCAATT TGGGTCAGCA GTCCATGCCC
 901  AACAGACCCA ACTACATTGG CTTCAGAGAC AACTTTATCG GTCTCATGTA CTACAACAGC
 961  ACTGGCAATA TGGGTGTACT GGCTGGTCAG GCCTCCCAGC TGAATGCTGT GGTGGACTTG
1021  CAGGACAGAA ACACTGAACT GTCCTACCAG CTCTTGCTTG ACTCTCTGGG TGACAGAACC
1081  AGGTATTTTA GTATGTGGAA TCAGGCGGTG GACAGTTATG ACCCCGATGT GCGCATTATT
1141  GAAAATCACG GTGTGGAGGA TGAACTCCCT AATTATTGCT TCCCCCTTAA TGCTGTGGGT
1201  AGAACTGATA CTTACCAGGG AATTAAGGCC AATGGTGCTG ATCAAACCAC ATGGACCAAA
1261  GATGATACTG TTAATGATGC TAATGAATTG GGCAAGGGCA ATCCTTTCGC CATGGAGATC
1321  AACATCCAGG CCAACCTGTG GCGGAACTTC CTCTACGCGA ACGTGGCCCT GTACCTGCCC
1381  GACTCCTACA AGTACACGCC GGCCAACATC ACGCTGCCCA CCAACACCAA CACCTACGAT
1441  TACATGAACG GCCGCGTGGT GGCGCCCTCG CTGGTGGACG CCTACATCAA CATCGGGGCG
1501  CGCTGGTCGC TGGACCCCAT GGACAACGTC AACCCCTTCA ACCACCACCG CAACGCGGGC
1561  CTGCGCTACC GCTCCATGCT CCTGGGCAAC GGGCGCTACG TGCCCTTCCA CATCCAGGTG
1621  CCCCAAAAGT TCTTCGCCAT CAAGAGCCTC CTGCTCCTGC CCGGGTCCTA CACCTACGAG
1681  TGGAACTTCC GCAAGGACGT CAACATGATC CTGCAGAGCT CCCTCGGCAA CGACCTGCGC
1741  ACGGACGGGG CCTCCATCGC CTTCACCAGC ATCAACCTCT ACGCCACCTT CTTCCCCATG
1801  GCGCACAACA CCGCCTCCAC GCTCGAGGCC ATGCTGCGCA ACGACACCAA CGACCAGTCC
1861  TTCAACGACT ACCTCTCGGC GGCCAACATG CTCTACCCCA TCCCGGCCAA TGCCACCAAC
1921  GTGCCCATCT CCATCCCCTC GCGCAACTGG GCCGCCTTCC GCGGATGGTC CTTCACGCGC
1981  CTCAAGACCC GCGAGACGCC CTCGCTAGGC TCCGGGTTCG ACCCCTACTT CGTCTACTCG
2041  GGCTCCATCC CCTACCTCGA CGGCACCTTC TACCTCAACC ACACCTTCAA GAAGGTCTCC
2101  ATCACCTTCG ACTCCTCCGT CAGCTGGCCC GGCAACGACC GCCTCCTGAC GCCCAACGAG
2161  TTCGAAATCA AGCGCACCGT CGACGGAGAG GGGTACAACG TGGCCCAGTG CAACATGACC
2221  AAGGACTGGT TCCTGGTCCA GATGCTGGCC CACTACAACA TCGGCTACCA GGGCTTCTAC
2281  GTGCCCGAGG GCTACAAGGA CCGCATGTAC TCCTTCTTCC GCAACTTCCA GCCCATGAGC
2341  CGCCAGGTCG TGGACGAGGT CAACTACAAG GACTACCAGG CCGTCACCCT GGCCTACCAG
2401  CACAACAACT CGGGCTTCGT CGGCTACCTC GCGCCCACCA TGCGCCAGGG CCAGCCCTAC
2461  CCCGCCAACT ACCCCTACCC GCTCATCGGC AAGAGCGCCG TCGCCAGCGT CACCCAGAAA
2521  AAGTTCCTCT GCGACCGGGT CATGTGGCGC ATCCCCTTCT CCAGCAACTT CATGTCCATG
2581  GGCGCGCTCA CCGACCTCGG CCAGAACATG CTCTACGCCA ACTCCGCCCA CGCGCTAGAC
2641  ATGAATTTCG AAGTCGACCC CATGGATGAG TCCACCCTTC TCTATGTTGT CTTCGAAGTC
2701  TTCGACGTCG TCCGAGTGCA CCAGCCCCAC CGCGGCGTCA TCGAGGCCGT CTACCTGCGC
2761  ACGCCCTTCT CGGCCGGCAA CGCCACCACC TAA  (SEQ ID NO: 21)
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FIG. 26

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   1  ATGGCGACCC CATCGATGAT GCCGCAGTGG TCGTACATGC ACATCTCGGG CCAGGACGCC
  61  TCGGAGTACC TGAGTCCCGG GCTGGTGCAG TTCGCTCGCG CCACCGAGAG CTACTTCAGT
 121  CTGAGTAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGG
 181  TCCCAGCGCC TGACGCTGCG GTTCATCCCC GTGGACCGCG AGGACACCGC GTACTCGTAC
 241  AAGGCGCGGT TCACCCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CTCCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGACCGCGGC CCCACCTTCA AGCCCTACTC CGGCACCGCY
 361  TACAACTCCC TGGCCCCCAA GGGCGCTCCC AACTCCTGCG AGTGGGAGCA AGAGGAAACT
 421  CAGGCAGTTG AAGAAGCAGC AGAAGAGGAG GAAGAAGATG CTGACGGTCA AGCTGAGGAA
 481  GAGCAAGCAG CTACCAAAAA GACTCATGTA TATGCTCAGG CTCCCCTTTC CGGCGAAAAA
 541  ATTAGCAAAG ACGGTCTGCA GATAGGAACG GACGCTACAG CAACCGAACA AAAACCTATT
 601  TATGCAGACC CTACATTCCA GCCCGAACCC CAAATCGGGG AGTCCCAGTG GAATGAGGCA
 661  GATGCTACAG TCGCTGGTGG TAGAGTGCTC AAGAAAACCA CTCCCATGAA ACCATGCTAT
 721  GGTTCCTATG CAAGACCCAC GAATGCTAAT GGAGGTCAGG GTGTACTAGC GGCAAATGCC
 781  CAAGGACAGC TAGAATCTCA GGTTGAAATG CAATTCTTTT CAACTTCTGA AAACGCCCGT
 841  AACGAGGCTA ACAACATTCA GCCCAAATTG GTGCTGTATA GCGAGGATGT GCACATGGAG
 901  ACCCCGGATA CACACCTCTC TTACAAGCCC ACAAAAAGCG ATGACAATTC TAAAGTTATG
 961  CTGGGCCAAC AGGCCATGCC CAACAGGCCT AATTACATTG GCTTCAGAGA CAACTTTATC
1021  GGTCTCATGT ACTACAACAG CACTGGCAAC ATGGGAGTGC TTGCAGGTCA GGCCTCTCAG
1081  TTGAATGCAG TGGTGGACTT GCAAGACAGA AACACAGAAC TGTCCTACCA GCTCTTGCTT
1141  GATTCCATGG GTGACAGAAC CAGATATTTC TCCATGTGGA ATCAGGCAGT GGACAGTTAT
1201  GACCCAGATG TCAGAATTAT TGAAAATCAT GGAACTGAAG ACGAGCTCCC CAACTATTGT
1261  TTCCCTCTGG GCGGCATAGG GGTAACTGAC ACTTACCAGG CTGTTAAGAC CAACAATGGC
1321  AATAATGGGG GTCAGGTGAC TTGGACAAAA GATGAAACTT TTGCAGAGCG CAATGAGATA
1381  GGGGTGGGAA ACAATTTCGC CATGGAGATC AACCTCAATG CCAACCTGTG GAGGAACTTC
1441  CTGTACTCCA ACGTGGCCCT GTACCTGCCA GACAAGCTTA AGTACAACCC CTCCAACGTG
1501  GACATCTCTG ACAACCCCAA CACCTACGAT TACATGAACA AGCGAGTGGT GGCCCCGGGG
1561  CTGGTGGACT GCTACATCAA CCTGGGCGCG CGCTGGTCGC TGGACTACAT GGACAACGTC
1621  AACCCTTTCA ACCACCACCG CAACGCGGGC CTGCGCTACC GCTCCATGCT CCTGGGCAAC
1681  GGGCGCTACG TGCCCTTCCA CATCCAGGTG CCCCAGAAGT TCTTTGCCAT CAAGAACCTC
1741  CTCCTCCTGC CGGGCTCCTA CACCTACGAG TGGAACTTCA GGAAGGATGT CAACATGGTC
1801  CTCCAGAGCT CTCTGGGCAA CGATCTCAGG GTGGACGGGG CCAGCATCAA GTTCGAGAGC
1861  ATCTGCCTCT ACGCCACCTT CTTCCCCATG GCCCACAACA CCGCCTCCAC GCTCGAGGCC
1921  ATGCTCAGGA ACGACACCAA CGACCAGTCC TTCAATGACT ACCTCTCCGC CGCCAACATG
1981  CTCTACCCCA TCCCCGCCAA CGCCACCAAC GTCCCCATCT CCATCCCCTC GCGCAACTGG
2041  GCGGCCTTCC GCGGCTGGGC CTTCACCCGC CTCAAGACCA AGGAGACCCC CTCCCTGGGC
2101  TCGGGATTCG ACCCCTACTA CACCTACTCG GGATCCATTC CCTACCTGGA CGGCACCTTC
2161  TACCTCAACC ACACTTTCAA GAAGGTCTCG GTCACCTTCG ACTCCTCGGT CAGCTGGCCG
2221  GGCAACGACC GCCTGCTCAC CCCCAACGAG TTCGAGATCA AGCGCTCGGT CGACGGGGAG
2281  GGCTACAACG TGGCCCAGTG CAACATGACC AAGGACTGGT TCCTGGTCCA GATGCTGGCC
2341  AACTACAACA TCGGCTACCA GGGCTTCTAC ATCCCAGAGA GCTACAAGGA CAGGATGTAC
2401  TCCTTCTTCA GGAACTTCCA GCCCATGAGC CGGCAGGTGG TGGACCAGAC CAAGTACAAG
2461  GACTACCAGG AGGTGGGCAT CATCCACCAG CACAACAACT CGGGCTTCGT GGGCTACCTC
2521  GCCCCCACCA TGCGCGAGGG ACAGGCCTAC CCCGCCAACT TCCCCTACCC GCTCATAGGC
2581  AAGACCGCGG TCGACAGCAT CACCCAGAAA AAGTTCCTCT GCGACCGCAC CCTCTGGCGC
2641  ATCCCCTTCT CCAGCAACTT CATGTCCATG GGTGCGCTCA CGGACCTGGG CCAGAACCTG
2701  CTCTATGCCA ACTCCGCCCA CGCGCTCGAC ATGACCTTCG AGGTCGACCC CATGGACGAG
2761  CCCACCCTTC TCTATGTTCT GTTCGAAGTC TTTGACGTGG TCCGGGTCCA CCAGCCGCAC
2821  CGCGGCGTCA TCGAGACCGT GTACCTGCGC ACGCCCTTCT CGGCCGGCAA CGCCACCACC
2881  TAA  (SEQ ID NO: 22)
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FIG. 27

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   1  ATGGCCACCC CATCGATGCT GCCCCAGTGG GCGTACATGC ACATCGCCGG ACAGGACGCT
  61  TCGGAGTACC TGAGTCCGGG TCTGGTGCAG TTCGCCCGCG CCACAGACAC CTACTTCAGT
 121  CTGGGGAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGC
 181  AGCCAGCGGC TGACGCTGCG CTTCGTGCCC GTGGACCGCG AGGACAACAC CTACTCGTAC
 241  AAAGTGCGCT ACACGCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CAGCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGACCGGGGC CCTAGCTTCA AACCCTACTC CGGCACCGCC
 361  TACAACAGCC TGGCCCCCAA GGGAGCTCCC AATTCCAGTC AGTGGGAGCA GACGGAGAAC
 421  GGGGGCGGAC AGGCTACGAC TAAAACACAC ACCTATGGAG TTGCCCCAAT GGGTGGAACT
 481  AATATTACAG TCGACGGACT ACAAATTGGA ACTGACGCTA CAGCTGATAC GGAAAAACCA
 541  ATTTATGCTG ATAAAACATT CCAACCTGAG CCTCAGATAG GAGAGGAAAA CTGGCAAGAA
 601  ACTGAAAGCT TTTATGGCGG TAGGGCTCTT AAGAAAGACA CAAACATGAA GCCTTGTTAT
 661  GGCTCATTTG CCAGACCTAC CAATGAAAAG GGAGGTCAAG CTAAACTTAA AGTTGGAGCT
 721  GATGGGCTGC CGACCAAAGA ATTTGACATA GACCTAGCAT TCTTTGATAC TCCTGGTGGC
 781  ACTGTGACCG GAGGTACAGA GGAGTATAAA GCAGATATTG TTATGTATAC CGAAAACACG
 841  TATCTGGAAA CTCCAGACAC ACATGTGGTG TATAAACCAG GCAAGGATAA CACAAGTTCT
 901  AAAATTAACC TGGTCCAGCA GTCTATGCCC AACAGGCCCA ACTACATTGG GTTTAGGGAC
 961  AACTTTATTG GGCTCATGTA TTACAACAGC ACTGGCAATA TGGGTGTGCT GGCCGGTCAG
1021  GCTTCTCAGT TGAATGCTGT GGTTGACTTG CAAGACAGAA ACACTGAACT GTCTTACCAG
1081  CTCTTGCTTG ACTCTTTGGG TGACAGAACC AGGTATTTCA GTATGTGGAA TCAGGCGGTG
1141  GACAGTTATG ATCCTGATGT GCGCATTATT GAAAACCATG GTGTGGAAGA TGAACTTCCC
1201  AACTATTGCT TCCCCCTGGA TGGGTCTGGC ACTAACGCCG CTTACCAAGG TGTGAAAGTA
1261  AAAAATGGTC AAGATGGTGA TGTTGAGAGC GAATGGGAAA AAGATGATAC TGTCGCAGCT
1321  CGAAATCAAT TATGCAAGGG CAACATTTTT GCCATGGAGA TCAATCTCCA GGCCAACCTG
1381  TGGAGAAGTT TTCTCTACTC GAACGTGGCC CTGTACCTGC CCGATTCTTA CAAGTACACG
1441  CCGGCCAACA TCACCCTGCC CACCAACACC AACACCTACG ATTACATGAA CGGGAGAGTG
1501  GTGCCTCCCT CGCTGGTGGA CGCCTACATC AACATCGGGG CGCGCTGGTC GCTGGACCCC
1561  ATGGACAACG TCAATCCCTT CAACCACCAT CGCAACGCGG GGCTGCGCTA CCGCTCCATG
1621  CTCCTGGGCA ACGGGCGCTA CGTGCCCTTC CACATCCAGG TGCCCCAGAA ATTTTTCGCC
1681  ATTAAGAGCC TCCTGCTCCT GCCCGGGTCC TACACCTACG AGTGGAACTT CCGCAAGGAC
1741  GTCAACATGA TCCTGCAGAG CTCCCTCGGC AACGACCTGC GCACGGACGG GGCCTCCATC
1801  TCCTTCACCA GCATCAACCT CTACGCCACC TTCTTCCCCA TGGCGCACAA CACCGCCTCC
1861  ACGCTCGAGG CCATGCTGCG CAACGACACC AACGACCAGT CCTTCAACGA CTACCTCTCG
1921  GCGGCCAACA TGCTCTACCC CATCCCGGCC AACGCCACCA ACGTGCCCAT CTCCATCCCC
1981  TCGCGCAACT GGGCCGCCTT CCGCGGCTGG TCCTTCACGC GCCTCAAGAC CAAGGAGACG
2041  CCCTCGCTGG GCTCCGGGTT CGACCCCTAC TTCGTCTACT CGGGCTCCAT CCCCTACCTC
2101  GACGGCACCT TCTACCTCAA CCACACCTTC AAGAAGGTCT CCATCACCTT CGACTCCTCC
2161  GTCAGCTGGC CCGGCAACGA CCGGCTCCTG ACGCCCAACG AGTTCGAAAT CAAGCGCACC
2221  GTCGACGGCG AGGGCTACAA CGTGGCCCAG TGCAACATGA CCAAGGACTG GTTCCTGGTC
2281  CAGATGCTGG CCCACTACAA CATCGGCTAC CAGGGCTTCT ACGTGCCCGA GGGCTACAAG
2341  GACCGCATGT ACTCCTTCTT CCGCAACTTC CAGCCCATGA GCCGCCAGGT CGTGGACGAG
2401  GTCAACTACA AGGACTACCA GGCCGTCACC CTGGCCTACC AGCACAACAA CTCGGGCTTC
2461  GTCGGCTACC TCGCGCCCAC CATGCGCCAG GGCCAGCCCT ACCCCGCCAA CTACCCCTAC
2521  CCGCTCATCG GCAAGAGCGC CGTCGCCAGC GTCACCCAGA AAAAGTTCCT CTGCGACCGG
2581  GTCATGTGGC GCATCCCCTT CTCCAGCAAC TTCATGTCCA TGGGCGCGCT CACCGACCTC
2641  GGCCAGAACA TGCTCTACGC CAACTCCGCC CACGCGCTAG ACATGAATTT CGAAGTCGAC
2701  CCCATGGATG AGTCCACCCT TCTCTATGTT GTCTTCGAAG TCTTCGACGT CGTCCGAGTG
2761  CACCAGCCCC ACCGCGGCGT CATCGAGGCC GTCTACCTGC GCACCCCCTT CTCGGCCGGT
2821  AACGCCACCA CCTAA (SEQ ID NO: 23)
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FIG. 28

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   1  ATGGCGACCC CATCGATGAT GCCGCAGTGG TCGTACATGC ACATCTCGGG CCAGGACGCC
  61  TCNGAGTACC TGAGCCCCGG GCTGGTGCAG TTCGCCCGCG CCACCGAGAG CTACTTCAGC
 121  CTGAGTAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGG
 181  TCTCAGCGCC TGACGCTGCG GTTCATTCCC GTGGACCGCG AGGACACCGC GTACTCGTAC
 241  AAGGCGCGGT TCACCCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CTCCACCTAC
 301  TTTGACATCC GCGGGGTGCT GGACCGGGGT CCCACTTTCA AGCCCTACTC TGGCACCGCC
 361  TACAACTCCC TGGCCCCCAA GGGCGCTCCC AACTCCTGCG AGTGGGAGCA AGAGGAAACT
 421  CAGGCAGTTG AAGAAGCAGC AGAAGAGGAA GAAGAAGATG CTGACGGTCA AGCTGAGGAA
 481  GAGCAAGCAG CTACCAAAAA GACTCATGTA TATGCTCAGG CTCCCCTTTC TGGCGAAAAA
 541  ATTAGTAAAG ATGGTCTGCA AATAGGAACG GACGCTACAG CTACAGAACA AAAACCTATT
 601  TATGCAGACC CTACATTCCA GCCCGAACCC CAAATCGGGG AGTCACAGTG GAATGAGGCA
 661  GATGCTACAG TCGCCGGCGG TAGAGTGCTA AAGAAATCTA CTCCCATGAA ACCATGCTAT
 721  GGTTCCTATG CAAGACCCAC AAATGCTAAT GGAGGTCAGG GTGTACTAAC GGCAAATGCC
 781  CAGGGACAGC TAGAATCTCA GGTTGAAATG CAATTCTTTT CAACTTCTGA AAACGCCCGT
 841  AACGAGACTA ACAACATTCA GCCCAAATTG GTGCTGTATA GTGAGGATGT GCACATGGAG
 901  ACCCCGGATA CGCACCTTTC TTACAAGCCC GCAAAAAGCG ATGACAATTC AAAAATCATG
 961  CTGGGTCAGC AGTCCATGCC CAACAGACCT AATTACATCG GCTTCAGAGA TAACTTTATC
1021  GGCCTCATGT ATTACAATAG CACTGGCAAC ATGGGAGTGC TTGCAGGTCA GGCCTCTCAG
1081  TTGAATGCAG TGGTGGACTT GCAAGACAGA AACACAGAAC TGTCCTACCA GCTCTTGCTT
1141  GATTCCATGG GTGACAGAAC CAGATACTTT TCCATGTGGA ATCAGGCAGT GGACAGTTAT
1201  GACCCAGATG TTAGAATTAT TGAAAATCAT GGAACTGAAG ACGAGCTCCC CAACTATTGT
1261  TTCCCTCTGG GTGGCATAGG GGTAACTGAC ACTTACCAGG CTGTTAAAAC CAACAATGGC
1321  AATAACGGGG GCCAGGTGAC TTGGACAAAA GATGAAACTT TTGCAGATCG CAATGAAATA
1381  GGGGTGGGAA ACAATTTCGC TATGGAGATA AACCTCAGTG CCAACCTGTG GAGAAACTTC
1441  CTGTACTCCA ACGTGGCGCT GTACCTACCA GACAAGCTTA AGTACAACCC CTCCAATGTG
1501  GACATCTCTG ACAACCCCAA CACCTACGAT TACATGAACA AGCGAGTGGT GGCCCCGGGG
1561  CTGGTGGACT GCTACATCAA CCTGGGCGCG CGCTGGTCGC TGGACTACAT GGACAACGTC
1621  AACCCCTTCA ACCACCACCG CAATGCGGGC CTGCGCTACC GCTCCATGCT CCTGGGCAAC
1681  GGGCGCTACG TGCCCTTCCA CATCCAGGTG CCCCAGAAGT TCTTTGCCAT CAAGAACCTC
1741  CTCCTCCTGC CGGGCTCCTA CACCTACGAG TGGAACTTCA GGAAGGATGT CAACATGGTC
1801  CTCCAGAGCT CTCTGGGTAA CGATCTCAGG GTGGACGGGG CCAGCATCAA GTTCGAGAGC
1861  ATCTGCCTCT ACGCCACCTT CTTCCCCATG GCCCACAACA CGGCCTCCAC GCTCGAGGCC
1921  ATGCTCAGGA ACGACACCAA CGACCAGTCC TTCAATGACT ACCTCTCCGC CGCCAACATG
1981  CTCTACCCCA TACCCGCCAA CGCCACCAAC GTCCCCATCT CCATCCCCTC GCGCAACTGG
2041  GCGGCCTTCC GCGGCTGGGC CTTCACCCGC CTCAAGACCA AGGAGACCCC CTCCCTGGGC
2101  TCGGGATTCG ACCCCTACTA CACCTACTCG GGCTCCATTC CCTACCTGGA CGGCACCTTC
2161  TACCTCAACC ACACTTTCAA GAAGGTCTCG GTCACCTTCG ACTCCTCGGT CAGCTGGCCG
2221  GGCAACGACC GTCTGCTCAC CCCCAACGAG TTCGAGATCA AGCGCTCGGT CGACGGGGAG
2281  GGCTACAACG TGGCCCAGTG CAACATGACC AAGGACTGGT TCCTGGTCCA GATGCTGGCC
2341  AACTACAACA TCGGCTACCA GGGCTTCTAC ATCCCAGAGA GCTACAAGGA CAGGATGTAC
2401  TCCTTCTTCA GGAACTTCCA GCCCATGAGC CGGCAGGTGG TGGACCAGAC CAAGTACAAG
2461  GACTACCAGG AGGTGGGCAT CATCCACCAG CACAACAACT CGGGCTTCGT GGGCTACCTC
2521  GCCCCCACCA TGCGCGAGGG ACAGGCCTAC CCCGCCAACT TCCCCTATCC GCTCATAGGC
2581  AAGACCGCGG TCGACAGCAT CACCCAGAAA AAGTTCCTCT GCGACCGCAC CCTCTGGCGC
2641  ATCCCCTTCT CCAGCAACTT CATGTCCATG GGTGCGCTCT CGGACCTGGG CCAGAACTTG
2701  CTCTACGCCA ACTCCGCCCA CGCCCTCGAC ATGACCTTCG AGGTCGACCC CATGGACGAG
2761  CCCACCCTTC TCTATGTTCT GTTCGAAGTC TTTGACGTGG TCCGGGTCCA CCAGCCGCAC
2821  CGCGGCGTCA TCGAGACCGT GTACCTGCGT ACGCCCTTCT CGGCCGGCAA CGCCACCACC
2881  TAA (SEQ ID NO: 24)
```

FIG. 29

```
   1  ATGGCGACCC CATCGATGAT GCCGCAGTGG TCGTACATGC ACATCTCGGG CCAGGACGCC
  61  TCGGAGTACC TGAGCCCCGG GCTGGTGCAG TTCGCCCGCG CCACCGAGAG CTACTTCAGT
 121  CTGAGTAACA AGTTTAGGAA CCCCACGGTG GCGCCCACGC ACGATGTGAC CACCGACCGG
 181  TCCCAGCGCC TGACGCTGCG GTTCATCCCC GTGGACCGCG AGGACACCGC GTACTCGTAC
 241  AAGGCGCGGT TCACCCTGGC CGTGGGCGAC AACCGCGTGC TGGACATGGC CTCCACCTAC
 301  TTTGACATCC GCGGCGTGCT GGACCGCGGC CCCACCTTCA AGCCCTACTC CGGCACCGCC
 361  TACAACTCCC TGGCCCCCAA GGGCGCTCCC AACTCTTGTG AGTGGGAGCA ATTAGAAGAA
 421  GCCCAGGCCG CTTTGGAAGA CGAAGAATTA GAAGATGAAG ACGAGGAACC ACAGGATGAG
 481  GCGCCTGTGA AAAAGACCCA TGTATACGCT CAGGCTCCCC TTTCTGGAGA AGAAATTACT
 541  AAAGACGGTT TGCAAATAGG GTCAGATAAC ACAGAAGCTC AGTCTAAGCC TATATATGCA
 601  GACCCTACAT TCCAGCCCGA ACCCCAAATC GGGGAGTCCC AGTGGAACGA GGCAGATGCT
 661  ACAGTCGCTG GTGGTAGAGT GCTCAAGAAA ACCACTCCCA TGAAACCATG CTATGGTTCC
 721  TATGCAAGAC CCACGAATGC TAATGGAGGT CAGGGTGTGC TGGTGGCTGA TGATAAGGGG
 781  GTCCTTCAAT CTAAAGTTGA ATTGCAATTT TTTTCAAATA CTACTACTCT TAATCAGCGG
 841  GAGGGTAATG ATACAAAACC AAAAGTAGTG CTGTATAGCG AGGATGTGCA CATGGAAACA
 901  CCAGACACCC ACATTTCTTA CAAGCCCACA AAAAGCGATG ACAATTCTAA AGTTATGCTG
 961  GGCCAACAGT CCATGCCCAA CAGGCCTAAT TACATCGGCT TCAGAGACAA CTTTATCGGT
1021  CTCATGTACT ACAACAGCAC TGGCAACATG GGAGTGCTTG CAGGTCAGGC CTCTCAGTTG
1081  AATGCAGTGG TGGACTTGCA AGACAGAAAC ACAGAACTGT CCTACCAGCT CTTGCTTGAT
1141  TCCATGGGTG ACAGAACCAG ATATTTCTCC ATGTGGAATC AGGCAGTGGA CAGTTATGAC
1201  CCGGATGTCA GAATTATTGA AAATCATGGA ACCGAAGACG AGCTCCCCAA CTATTGTTTT
1261  CCTCTGGGTG GCATAGGGGT AACTGACACT TACCAGGTCA TTAAAACTAA TGGCAATGGT
1321  CAAGCAGACC CAACCTGGGA AAAAGATACA GAGTTTGCAG ACCGCAATGA AATAGGGGTG
1381  GGAAACAATT TCGCCATGGA GATCAACCTC AATGCCAACC TGTGGAGGAA CTTCCTGTAC
1441  TCCAACGTGG CCCTGTACCT GCCAGACAAG CTTAAGTACA ACCCCTCCAA CGTGGACATC
1501  TCTGACAACC CCAACACCTA CGATTACATG AACAAGCGAG TGGTGGCCCC GGGGCTGGTG
1561  GACTGCTACA TCAACCTGGG CGCGCGCTGG TCGCTGGACT ACATGGACAA CGTCAACCCC
1621  TTCAACCACC ACCGCAACGC GGGCCTGCGC TACCGCTCCA TGCTCCTGGG CAACGGGCGC
1681  TACGTGCCCT TCCACATCCA GGTGCCCCAG AAGTTCTTTG CCATCAAGAA CCTCCTCCTC
1741  CTGCCGGGCT CCTACACCTA CGAGTGGAAC TTCAGGAAGG ATGTCAACAT GGTCCTCCAG
1801  AGCTCTTTGG GCAACGATCT CAGGGTGGAC GGGGCCAGCA TCAAGTTCGA GAGCATCTGC
1861  CTCTACGCCA CCTTCTTCCC CATGGCCCAC AACACCGCCT CCACGCTCGA GGCCATGCTC
1921  AGGAACGACA CCAACGACCA GTCCTTCAAT GACTACCTCT CCGCCGCCAA CATGCTCTAC
1981  CCCATCCCCG CCAACGCCAC CAACGTCCCT ATCTCCATCC CCTCGCGCAA CTGGGCGGCC
2041  TTCCGCGGCT GGGCCTTCAC CCGCCTCAAG ACCAAGGAGA CACCCTCCCT GGGCTCGGGA
2101  TTCGACCCCT ACTACACCTA CTCGGGATCC ATTCCCTACC TGGACGGCAC CTTCTACCTC
2161  AACCACACTT TCAAGAAGGT CTCGGTCACC TTCGACTCCT CGGTCAGCTG GCCGGGCAAC
2221  GACCGCCTGC TCACCCCCAA CGAGTTCGAG ATCAAGCGCT CGGTCGACGG GGAGGGCTAC
2281  AACGTGGCCC AGTGCAACAT GACCAAGGAC TGGTTCCTGG TCCAGATGCT GGCCAACTAC
2341  AACATCGGCT ACCAGGGCTT CTACATCCCA GAGAGCTACA AGGACAGGAT GTACTCCTTC
2401  TTCAGGAACT TCCAGCCCAT GAGCCGGCAG GTGGTGGACC AAACCAAGTA CAAGGACTAC
2461  CAGGAGGTGG GCATCATCCA CCAGCACAAC AACTCGGGCT TCGTGGGCTA CCTCGCCCCC
2521  ACCATGCGCG AGGGACAGGC CTACCCCGCC AACTTCCCCT ACCCGCTCAT AGGCAAGACC
2581  GCGGTCGACA GCATCACCCA GAAAAAGTTC CTCTGCGACC GCACCCTCTG GCGCATCCCC
2641  TTCTCCAGCA ACTTCATGTC CATGGGTGCG CTCACGGACC TGGGCCAGAA CCTGCTCTAT
2701  GCCAACTCCG CCCACGCGCT CGACATGACC TTCGAGGTCG ACCCCATGGA CGAGCCCACC
2761  CTTCTCTATG TTCTGTTCGA AGTCTTTGAC GTGGTCCGGG TCCACCAGCC GCACCGCGGC
2821  GTCATCGAGA CCGTGTACCT GCGCACGCCC TTCTCGGCCG GCAACGCCAC CACCTAA
(SEQ ID NO: 25)
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FIG. 30

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                                                                                                  100
1
C1      MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFN LGNKFRNPTV APTHDVTTDR SQRLMLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTF
CV68    MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD3   MATPSMMPQW SYMHISGQDA SEYLSPGLVQ FARATESYFS LSNKFRNPTV APTHDVTTDR SQRLTLRFIP VDREDTAYSY KARFTLAVGD NRVLDMASTY
CHAD4   MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD5   MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD6   MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD7   MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD8   MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFN LGNKFRNPTV APTHDVTTDR SQRLMLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTF
CHAD9   MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD10  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD11  MATPSMMPQW SYMHISGQDA SEYLSPGLVQ FARATESYFS LSNKFRNPTV APTHDVTTDR SQRLTLRFIP VDREDTAYSY KARFTLAVGD NRVLDMASTY
CHAD16  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD17  MATPSMMPQW SYMHISGQDA SEYLSPGLVQ FARATESYFS LSNKFRNPTV APTHDVTTDR SQRLTLRFIP VDREDTAYSY KARFTLAVGD NRVLDMASTY
CHAD19  MATPSMMPQW SYMHISGQDA SEYLSPGLVQ FARATESYFS LSNKFRNPTV APTHDVTTDR SQRLTLRFIP VDREDTAYSY KARFTLAVGD NRVLDMASTY
CHAD20  MATPSMMPQW SYMHISGQDA SEYLSPGLVQ FARATESYFS LSNKFRNPTV APTHDVTTDR SQRLTLRFIP VDREDTAYSY KARFTLAVGD NRVLDMASTY
CHAD22  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFN LGNKFRNPTV APTHDVTTDR SQRLMLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTF
CHAD24  MATPSMMPQW SYMHISGQDA SEYLSPGLVQ FARATESYFS LSNKFRNPTV APTHDVTTDR SQRLTLRFIP VDREDTAYSY KARFTLAVGD NRVLDMASTY
CHAD26  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD30  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFN LGNKFRNPTV APTHDVTTDR SQRLMLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTF
CHAD31  MATPSMMPQW SYMHISGQDA SEYLSPGLVQ FARATESYFS LSNKFRNPTV APTHDVTTDR SQRLTLRFIP VDREDTAYSY KARFTLAVGD NRVLDMASTY
CHAD37  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFN LGNKFRNPTV APTHDVTTDR SQRLMLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTF
CHAD38  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD44  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD82  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
CHAD63  MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
PAN5    MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
PAN6    MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
PAN7    MATPSMLPQW AYMHIAGQDA SEYLSPGLVQ FARATDTYFS LGNKFRNPTV APTHDVTTDR SQRLTLRFVP VDREDNTYSY KVRYTLAVGD NRVLDMASTY
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FIG. 31A

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                301                                                
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```
                901                                                
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AATAAAAGATCTTTATTTTCATTAGATCTGTGTGTTGGTTTTTTGTGTG (SEQ ID NO: 26)

ATGGAATTCGTTTAAACCATCATCAATAATATACCTC (SEQ ID NO: 27)

CGCTGGCACTCAAGAGTGGCCTC (SEQ ID NO: 28)

ATGAAGCTTGTTTAAACCCATCATCAATAATATACCT (SEQ ID NO: 29)

ATCTAGACAGCGTCCATAGCTTACCG (SEQ ID NO: 30)

ATGCTACGTAGCGATCGCGTGAGTAGTGTTTGGGGGTGGGTGGG (SEQ ID NO: 31)

TAGGCGCGCCGCTTCTCCTCGTTCAGGCTGGCG (SEQ ID NO: 32)

GATCTAGTTAGTTTAAACGAATTCGGATCTGCGACGCG (SEQ ID NO: 33)

TTCGATCATGTTTAAACGAAATTAAGAATTCGGATCC (SEQ ID NO: 34)

TATTCTGCGATCGCTGAGGTGGGTGAGTGGGCG (SEQ ID NO: 35)

TAGGCGCGCCCTTAAACGGCATTTGTGGGAG (SEQ ID NO: 36)

CGTCTAGAAGACCCGAGTCTTACCAGT (SEQ ID NO: 37)

CGGGATCCGTTTAAACCATCATCAATAATATACCTTATT (SEQ ID NO: 38)

ATGGAATTCGTTTAAACCATCATCAATAATATACCTT (SEQ ID NO: 39)

ATGACGCGATCGCTGATATCCTATAATAATAAAACGCAGACTTTG (SEQ ID NO: 40)

TGTCCTACCARCTCTTGCTTGA (SEQ ID NO: 45)

GTGGAARGGCACGTAGCG (SEQ ID NO: 46)

FIG. 32

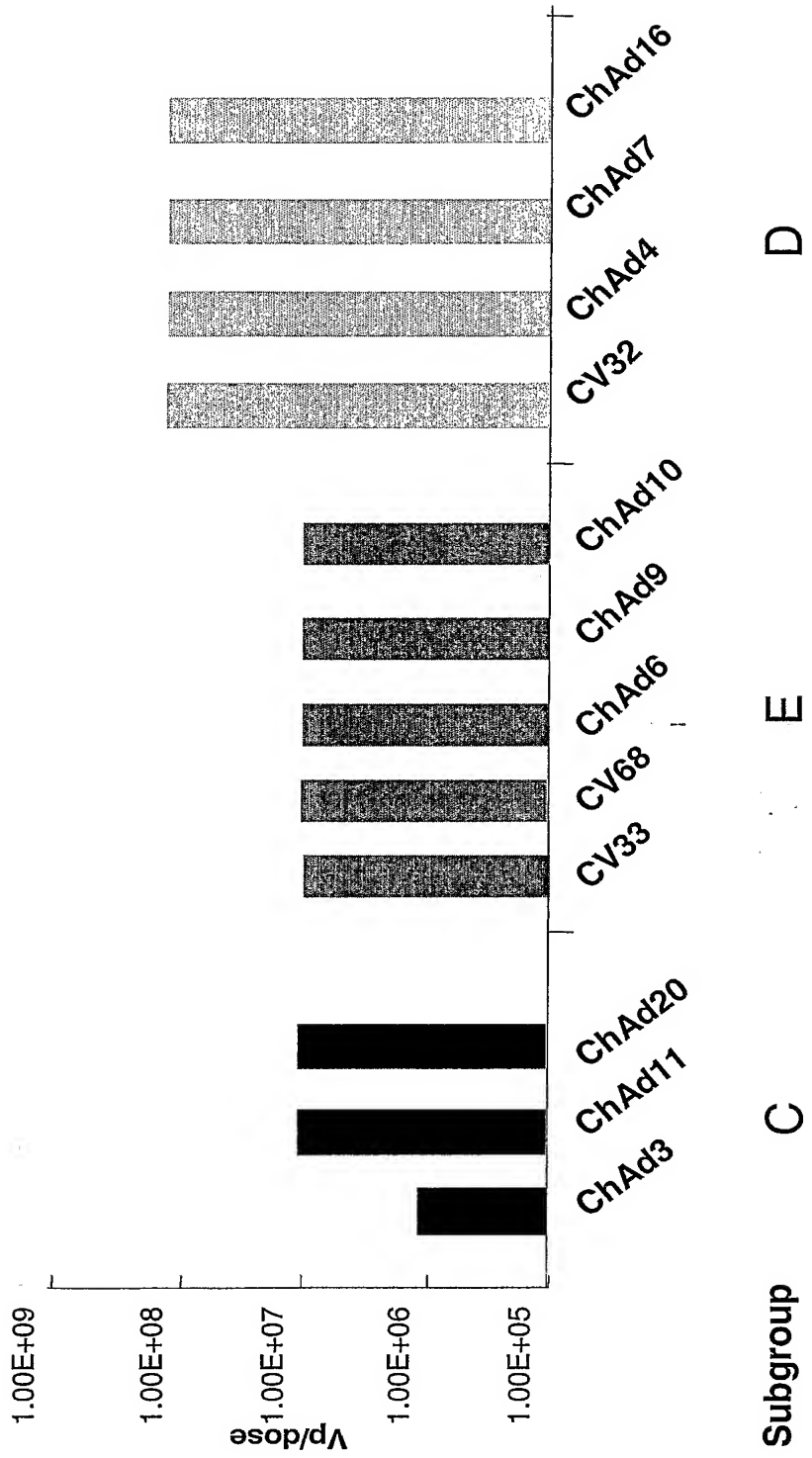
ChAd16
ChAd7
ChAd4
CV32
ChAd10
ChAd9
ChAd6
CV68
CV33
ChAd20
ChAd11
ChAd3
D
E
C
Subgroup
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
Vp/dose

FIG. 33

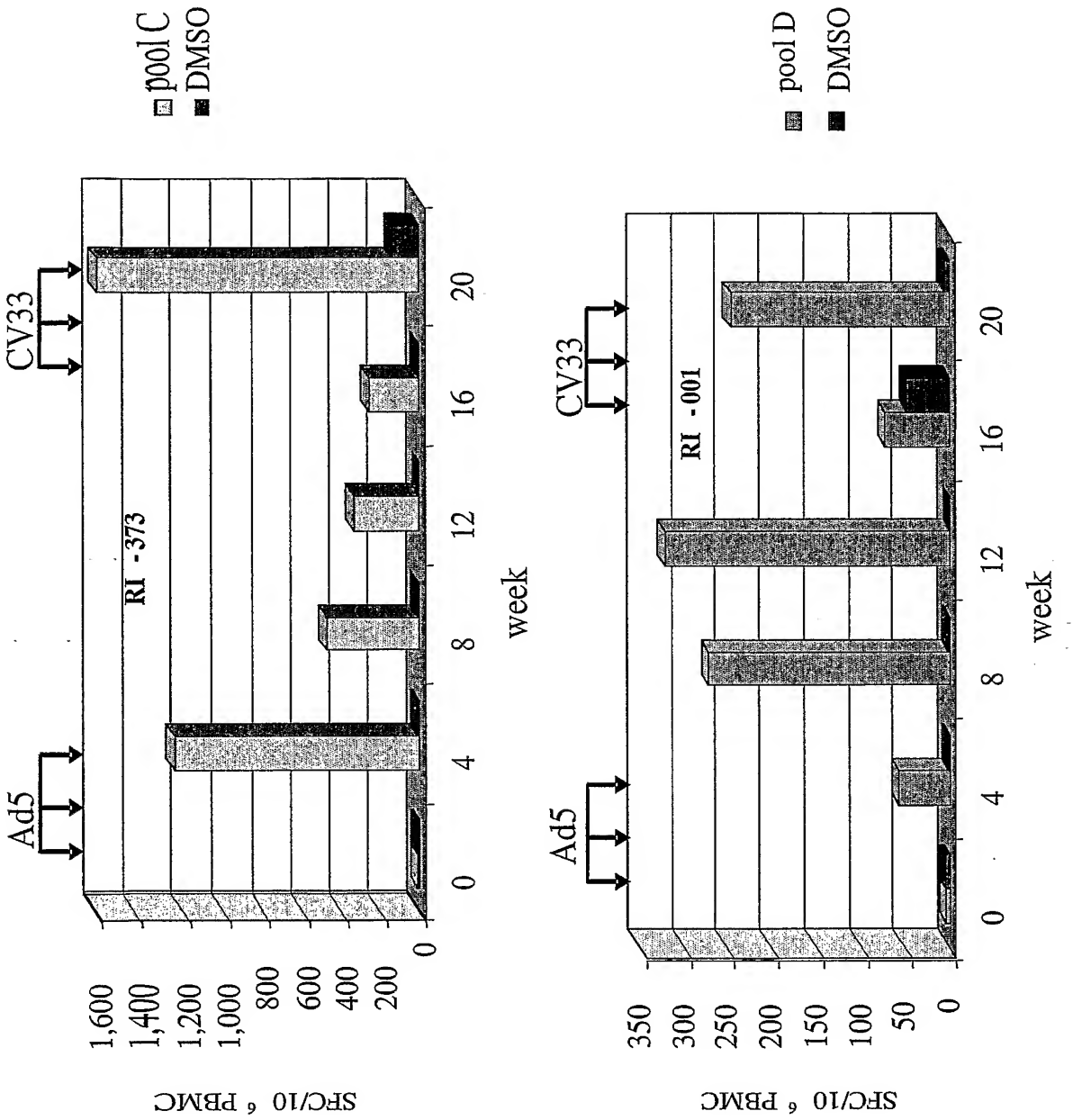
pool C
DMSO
CV33
Ad5
RI -373
SFC/10 6 PBMC
week
0
200
400
600
800
1,000
1,200
1,400
1,600
0
4
8
12
16
20
pool D
DMSO
CV33
Ad5
RI -001
SFC/10 6 PBMC
week
0
50
100
150
200
250
300
350
0
4
8
12
16
20

FIG. 34

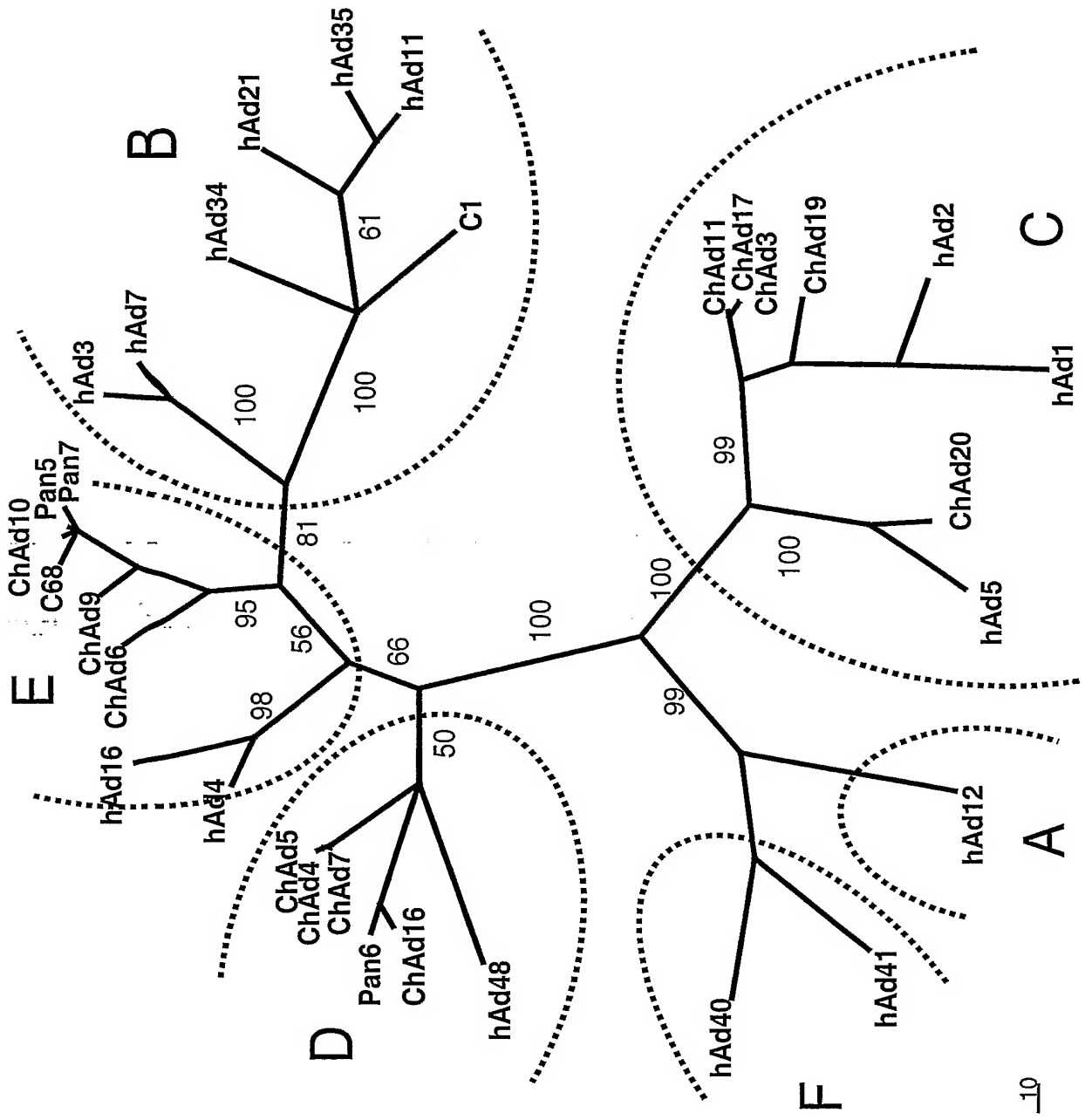
B
hAd35
hAd11
hAd21
C1
hAd34
61
hAd7
hAd3
100
100
ChAd10
Pan5
Pan7
C68
ChAd9
ChAd6
95
81
56
66
100
E
hAd16
hAd4
98
50
ChAd5
ChAd4
ChAd7
Pan6
ChAd16
hAd48
D
99
100
100
ChAd11
ChAd17
ChAd3
ChAd19
hAd2
hAd1
C
99
ChAd20
100
hAd5
hAd12
A
hAd40
hAd41
F
10

FIG. 35

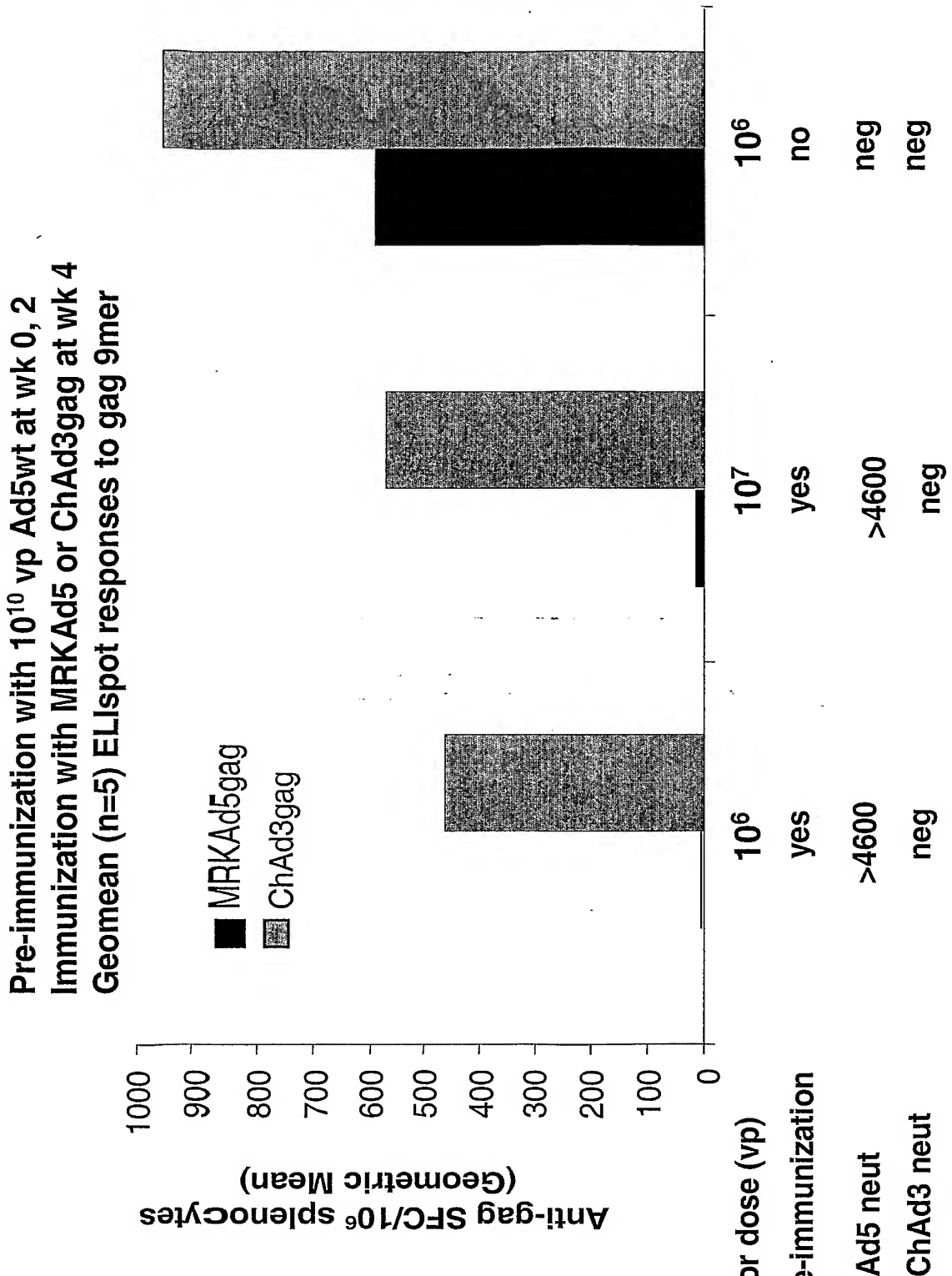
Pre-immunization with 10^{10} vp Ad5wt at wk 0, 2
Immunization with MRKAd5 or ChAd3gag at wk 4
Geomean (n=5) ELIspot responses to gag 9mer
MRKAd5gag
ChAd3gag
Anti-gag SFC/10^6 splenocytes (Geometric Mean)
1000
900
800
700
600
500
400
300
200
100
0
Vector dose (vp)
Ad5 pre-immunization
Anti-Ad5 neut
Anti-ChAd3 neut
10^6
yes
>4600
neg
10^7
yes
>4600
neg
10^6
no
neg
neg

FIG. 36

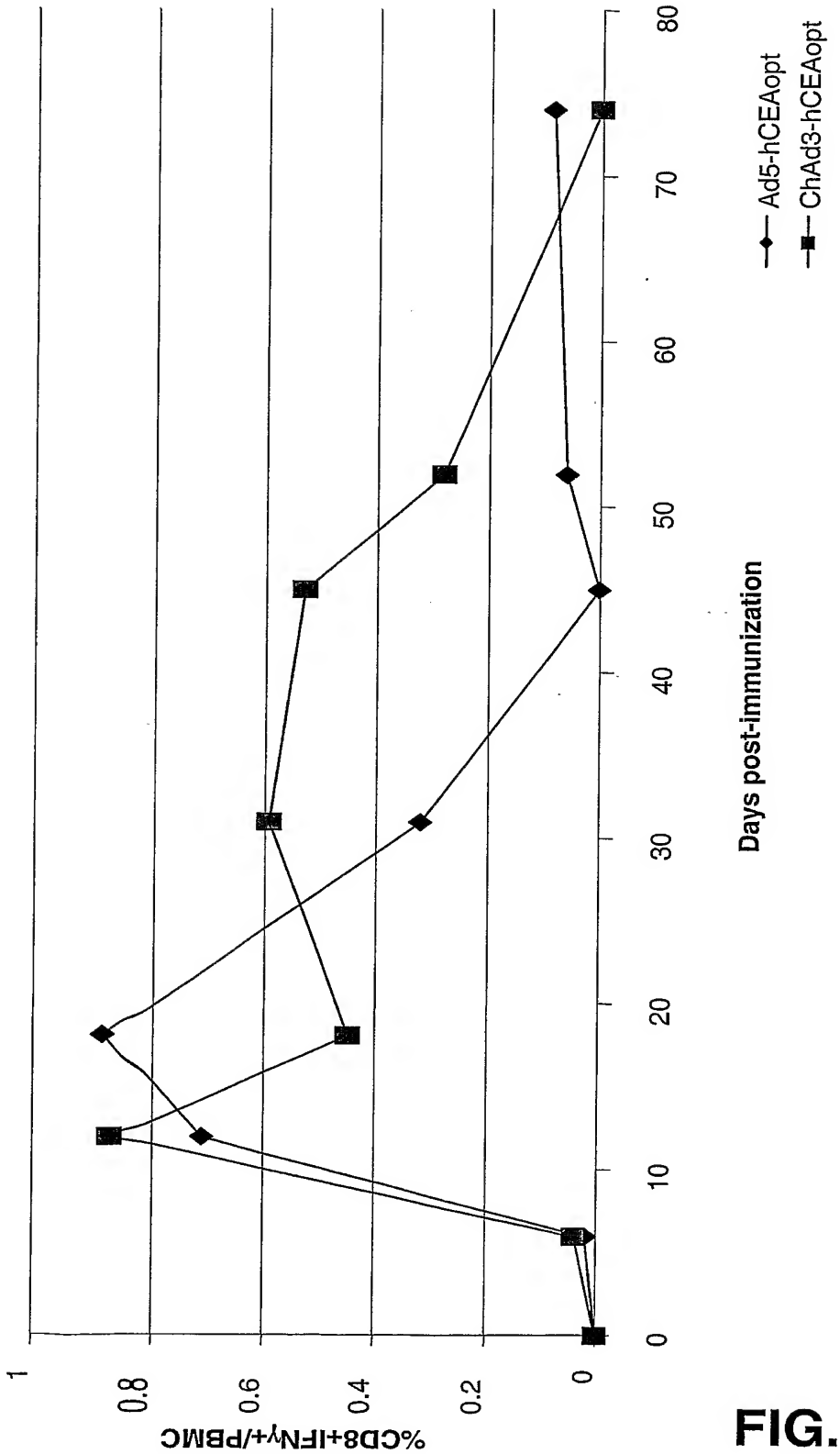
%CD8+IFNγ+/PBMC
0
0.2
0.4
0.6
0.8
1
0
10
20
30
40
50
60
70
80
Days post-immunization
Ad5-hCEAopt
ChAd3-hCEAopt

FIG. 37

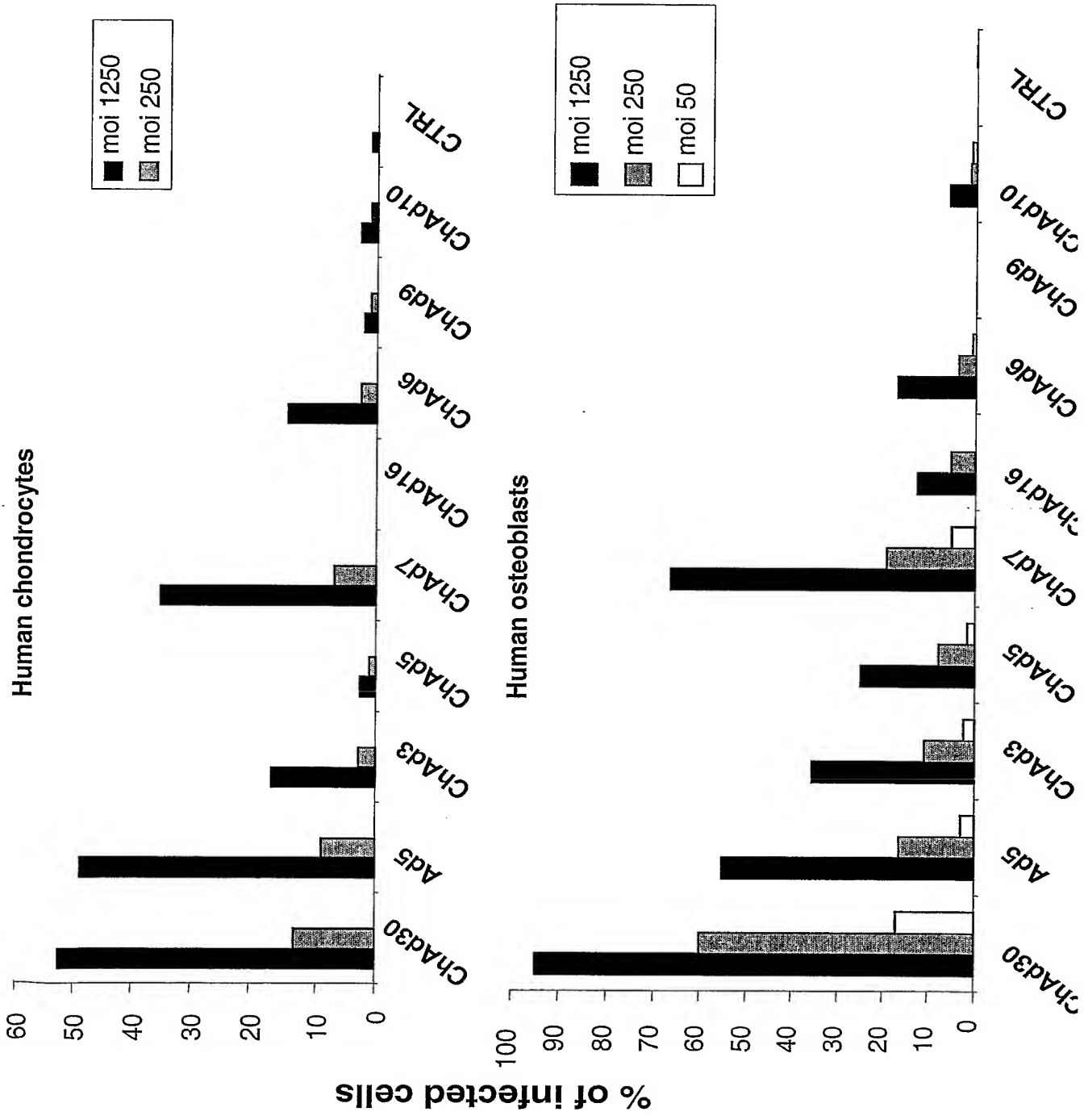
Human chondrocytes
moi 1250
moi 250
CTRL
ChAd10
ChAd9
ChAd6
ChAd16
ChAd7
ChAd5
ChAd3
Ad5
ChAd30
60
50
40
30
20
10
0
Human osteoblasts
moi 1250
moi 250
moi 50
CTRL
ChAd10
ChAd9
ChAd6
ChAd16
ChAd7
ChAd5
ChAd3
Ad5
ChAd30
100
90
80
70
60
50
40
30
20
10
0
% of infected cells

FIG. 38A

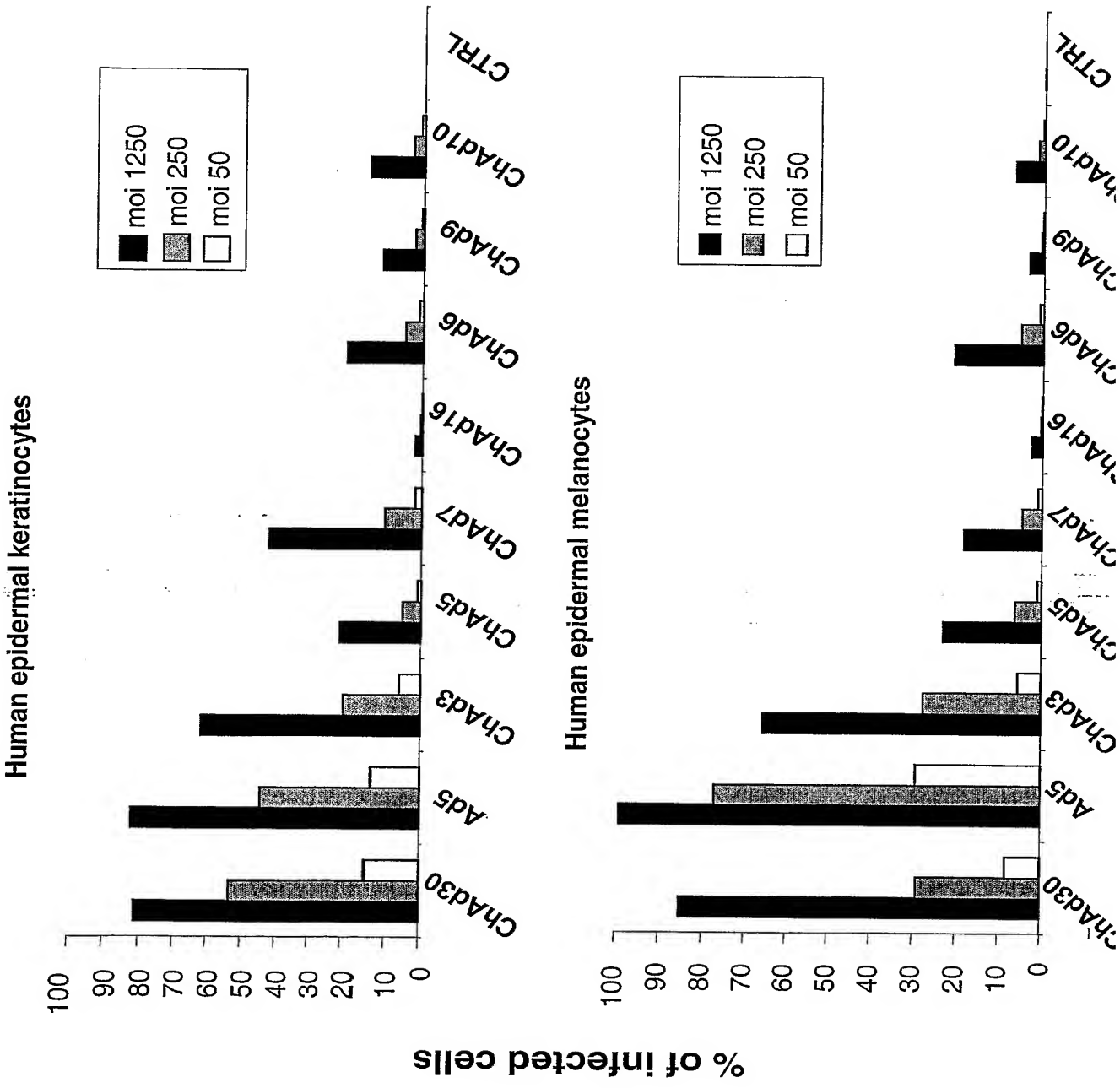
Human epidermal keratinocytes
Human epidermal melanocytes
% of infected cells
moi 1250
moi 250
moi 50
100
90
80
70
60
50
40
30
20
10
0
ChAd30
Ad5
ChAd3
ChAd5
ChAd7
ChAd16
ChAd6
ChAd9
ChAd10
CTRL

FIG. 38B

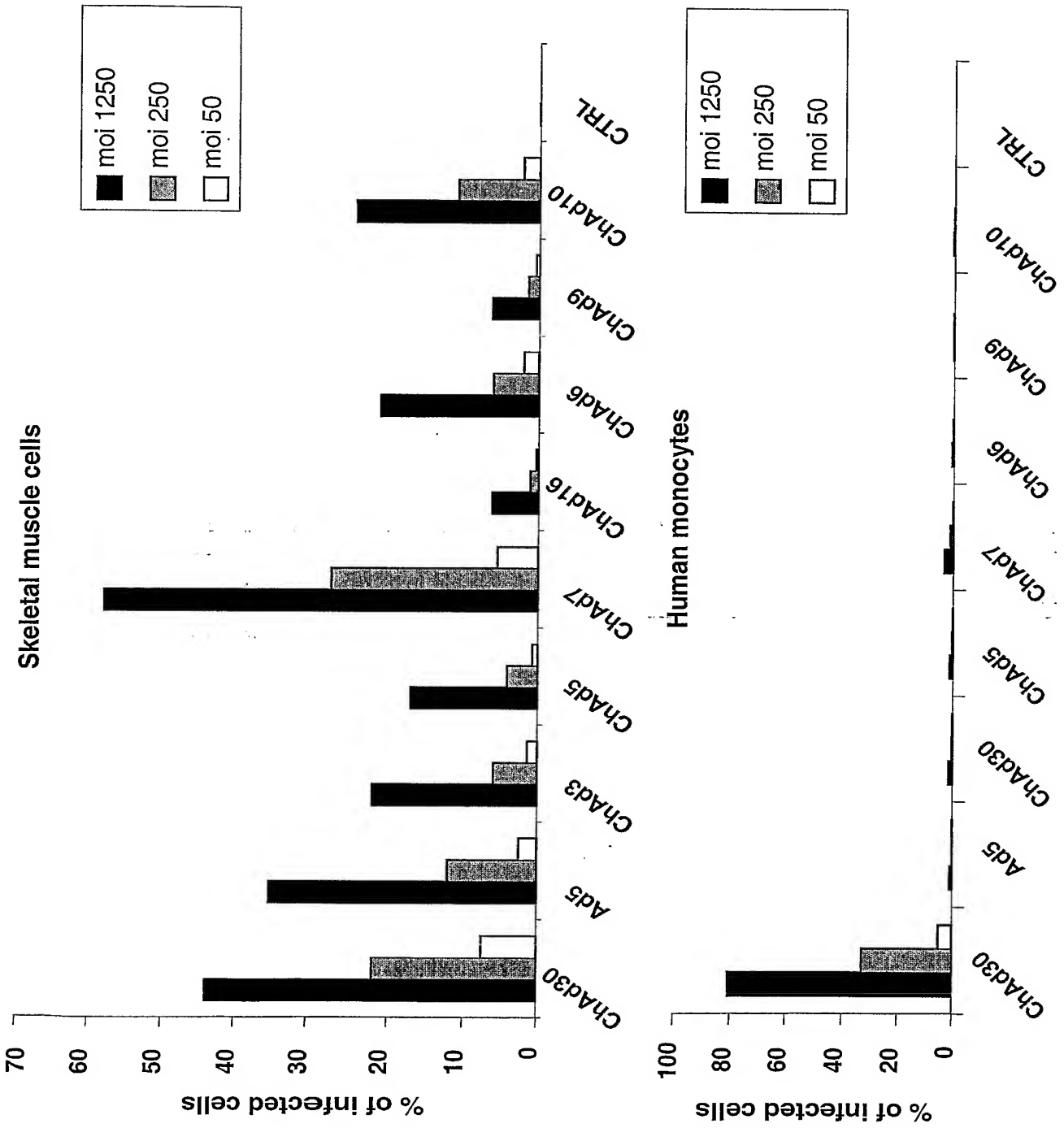
Skeletal muscle cells
moi 1250
moi 250
moi 50
% of infected cells
0
10
20
30
40
50
60
70
Chad30
Ad5
Chad3
Chad5
Chad7
Chad16
Chad6
Chad9
Chad10
CTRL
Human monocytes
moi 1250
moi 250
moi 50
% of infected cells
0
20
40
60
80
100
Chad30
Ad5
Chad30
Chad5
Chad7
Chad6
Chad9
Chad10
CTRL

FIG. 38C

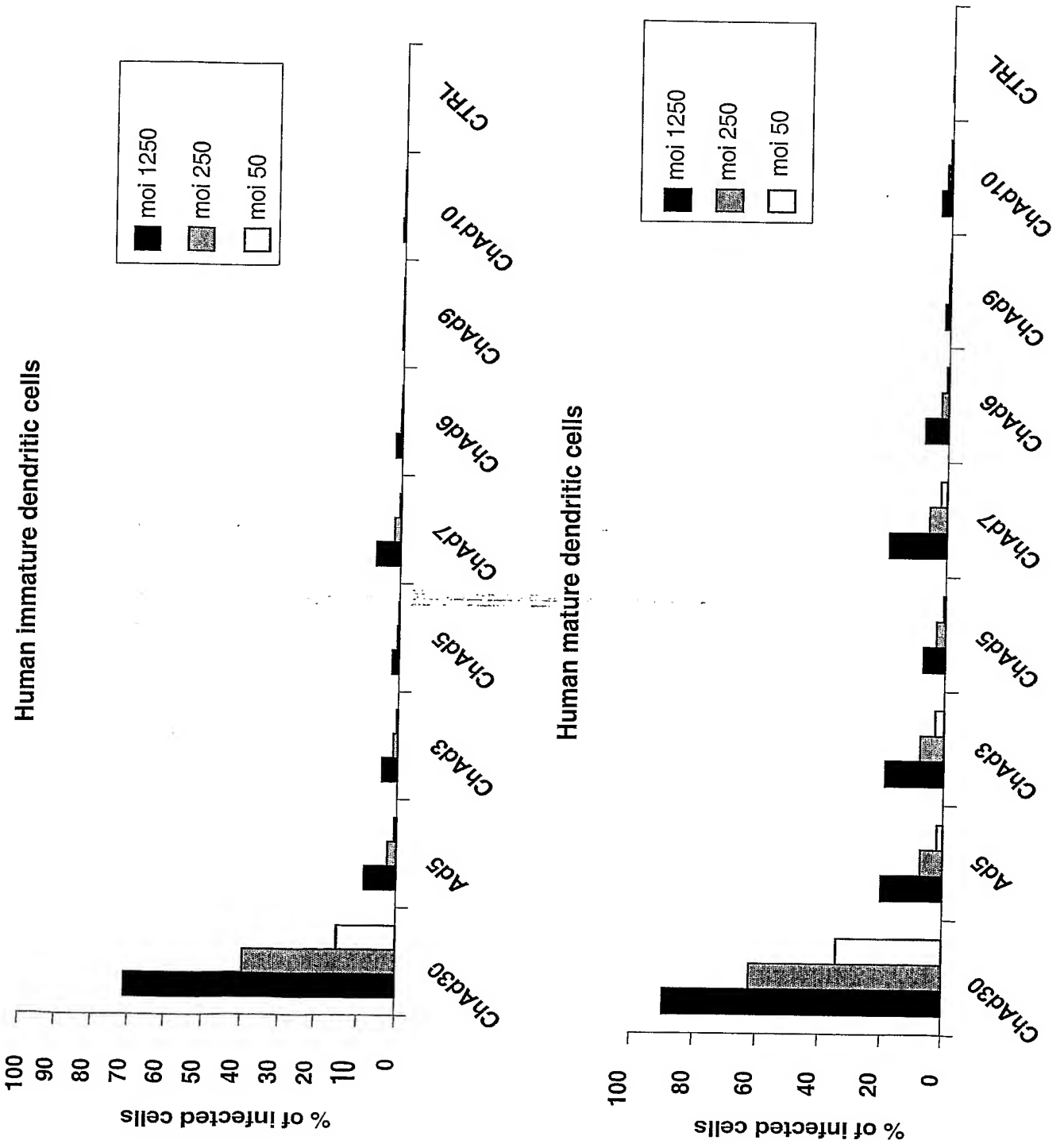
Human immature dendritic cells
moi 1250
moi 250
moi 50
% of infected cells
100
90
80
70
60
50
40
30
20
10
0
Ad5
ChAd3
ChAd5
ChAd7
ChAd6
ChAd9
ChAd10
CTRL
Human mature dendritic cells
moi 1250
moi 250
moi 50
% of infected cells
100
80
60
40
20
0
ChAd30
Ad5
ChAd3
ChAd5
ChAd7
ChAd6
ChAd9
ChAd10
CTRL

FIG. 38D